



covina

active streets & multimodal connectivity plan

FEHR & PEERS

MIG
Kosmont
CWE

Existing Conditions Report

City Mobility Snapshot
Existing Transportation Facilities
Pedestrian and Bicycle Safety and Comfort
Major Destinations and Accessibility

Appendix A: Equity Technical Study
Appendix B: Urban Design Technical Study
Appendix C: Market Study
Appendix D: Infrastructure Technical Study

The **Covina Active Streets and Multimodal Connectivity Plan (CASMCP)** will develop active transportation recommendations for the core of the City surrounding downtown.

This **existing conditions report** lays the groundwork for understanding the existing opportunities and needs of mobility in the study area through the lens of first/last mile access to transit, equity, urban design, infrastructure, and market trends.

As part of this existing conditions process, **technical studies were completed for each of these disciplines**. Key takeaways from each technical study have been woven into the body of the report. The equity, urban design, infrastructure, and market trends technical studies are included as an appendix. The first/last mile and mobility needs study is fully embedded into the body of this report.

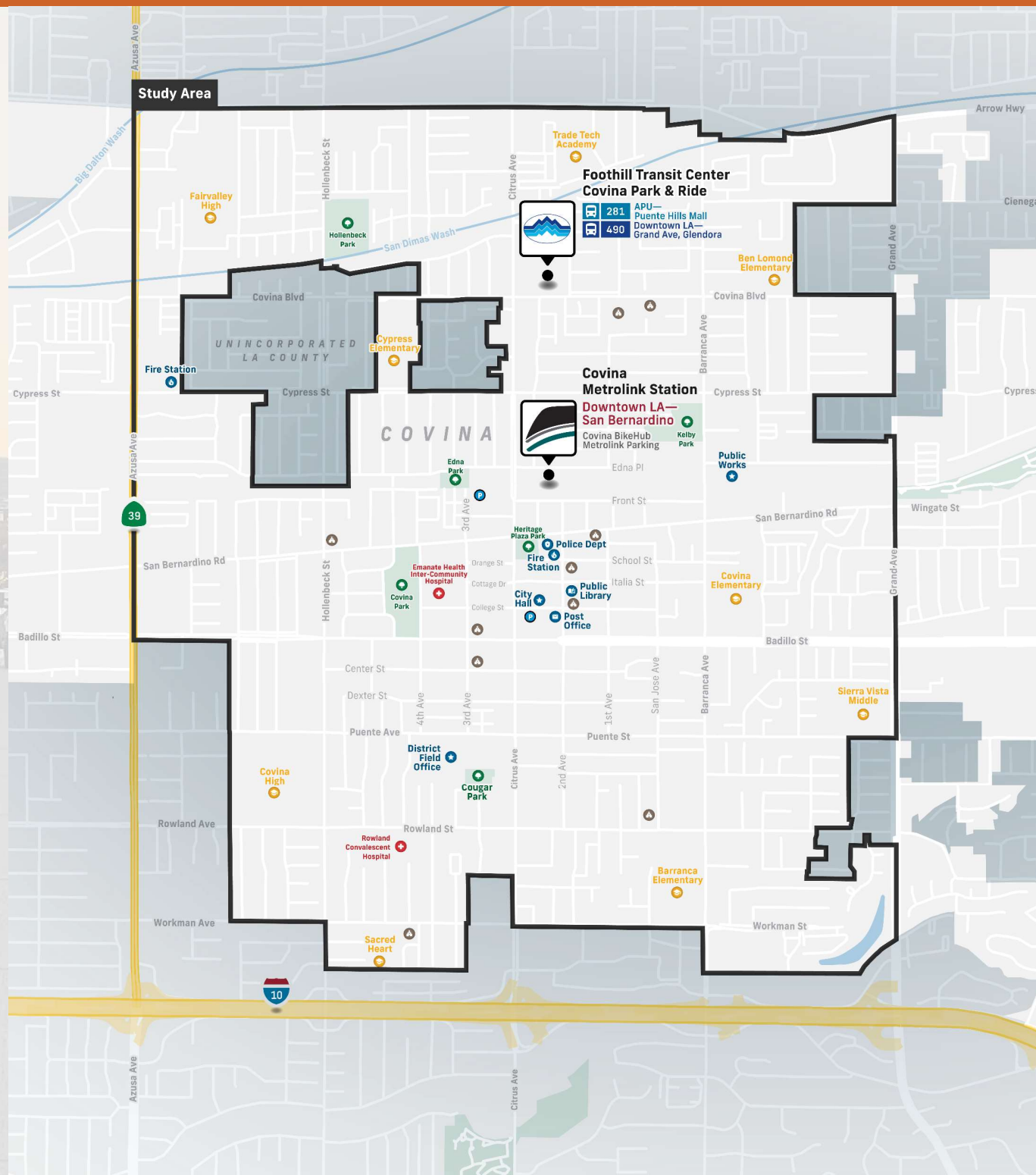
This report is broken into four key sections:

- **City Mobility Snapshot** provides a brief overview of key demographics and travel patterns throughout the City.
- **Existing Transportation Facilities** presents an overview of existing transit, bike, and pedestrian facilities provided throughout the study area.
- **Pedestrian and Bike Comfort and Safety** analyzes speed and collision history in the study area.
- **Major Destinations and Accessibility** provides an overview of key points of interest in the City and their accessibility via transit and active transportation.

Covina is an active, vibrant city that caters to its diverse community through food, culture, and entertainment.

The hub of the City is it's downtown. Restaurants, bars, businesses, and public space create an inviting space that residents gravitate toward.

The downtown and surrounding areas make up our **study area**.



The existing conditions process helped expose several key areas that could become the focus of the CASMCP recommendations. The following are the key needs and opportunities:

- The study area has one “Disadvantaged Community” as defined by SB 350/CalEnviroScreen and two “Sensitive Communities” as defined by UC Berkeley’s Urban Displacement Project. Investments should be prioritized in these two communities to **limit the burden of pollution and climate change**. Infrastructure investments should be paired with policy adjustments to **minimize displacement** following increased investment.
- A significant portion of Covina residents live and work in Covina, but still choose to drive to work. Providing safe, comfortable, and reliable biking and transit options could lead to **mode shift** for those who have shorter commuting distances.
- Crossing infrastructure is typically limited to standard crosswalk striping. There are opportunities to **enhance crosswalks** through tools such as intersection control, high-visibility signing and striping, and curb extensions.
- Existing bicycle facilities are typically limited to Class II bike lanes with some additional features like buffers and green bike boxes at select locations. There are opportunities to enhance both the connectivity and comfort of bike facilities by identifying a **low-stress network** throughout the study area.

- Wide curb-to-curb widths and underutilized space currently dedicated to autos provide an opportunity to **rebalance the right-of-way** and create more space for dedicated pedestrian and bicycle infrastructure.
- The City has a tree canopy coverage of about 16%. With the average August temperature in Covina above 90° and rising, there are opportunities to **expand the existing tree canopy and shade** to provide relief for people walking, biking, and waiting for transit.
- The large majority of bicycle and pedestrian injury collisions are occurring at intersections. Providing design treatments focused on **improving safety and comfort at intersections** could help reduce collision frequency and severity.
- Commercial and retail development potential along Citrus Avenue, San Bernardino Road, and Badillo Street and the 12 potential transit-oriented development sites in the study area provide a look-ahead at major destinations and travel patterns in the coming years. The multidisciplinary nature of the CASMCP provides an exciting opportunity to **align recommended investments with forecasted growth**.

City Mobility Snapshot

Demographics

Journey to work mode breakdown

CHTS all trips breakdown

Worker inflow/outflow

Commute times

Existing transit ridership

The City of Covina is diverse. Almost half of residents speak a language other than English at home and over 70% of residents are people of color.

RACE

	Covina	LA County
Hispanic or Latino	49%	59%
White alone	26%	23%
Asian & Pacific Islander alone	15%	13%
Black or African American alone	8%	3%
Two or More Races	<1%	2%
American Indian & Alaska Native alone	<1%	<1%
Other Race	<1%	<1%

LANGUAGES SPOKEN AT HOME

	Covina	LA County
English Only	52%	43%
Language other than English	48%	57%

MEDIAN AGE

	Covina	LA County
English Only	37.3	36.5

MEDIAN INCOME

	Covina	LA County
	\$70,780	\$68,044

VEHICLE AVAILABILITY

	Covina	LA County
None	2.5%	3.9%
1 or more	97.5%	96.1%

Source:

[2019 ACS 5-Year Estimates](#), US Census

ACS Demographic and Housing Estimates (Race), Languages Spoken at Home, Age and Sex (Median Age). Median Income, Commuting Characteristics By Sex (Vehicle Availability)

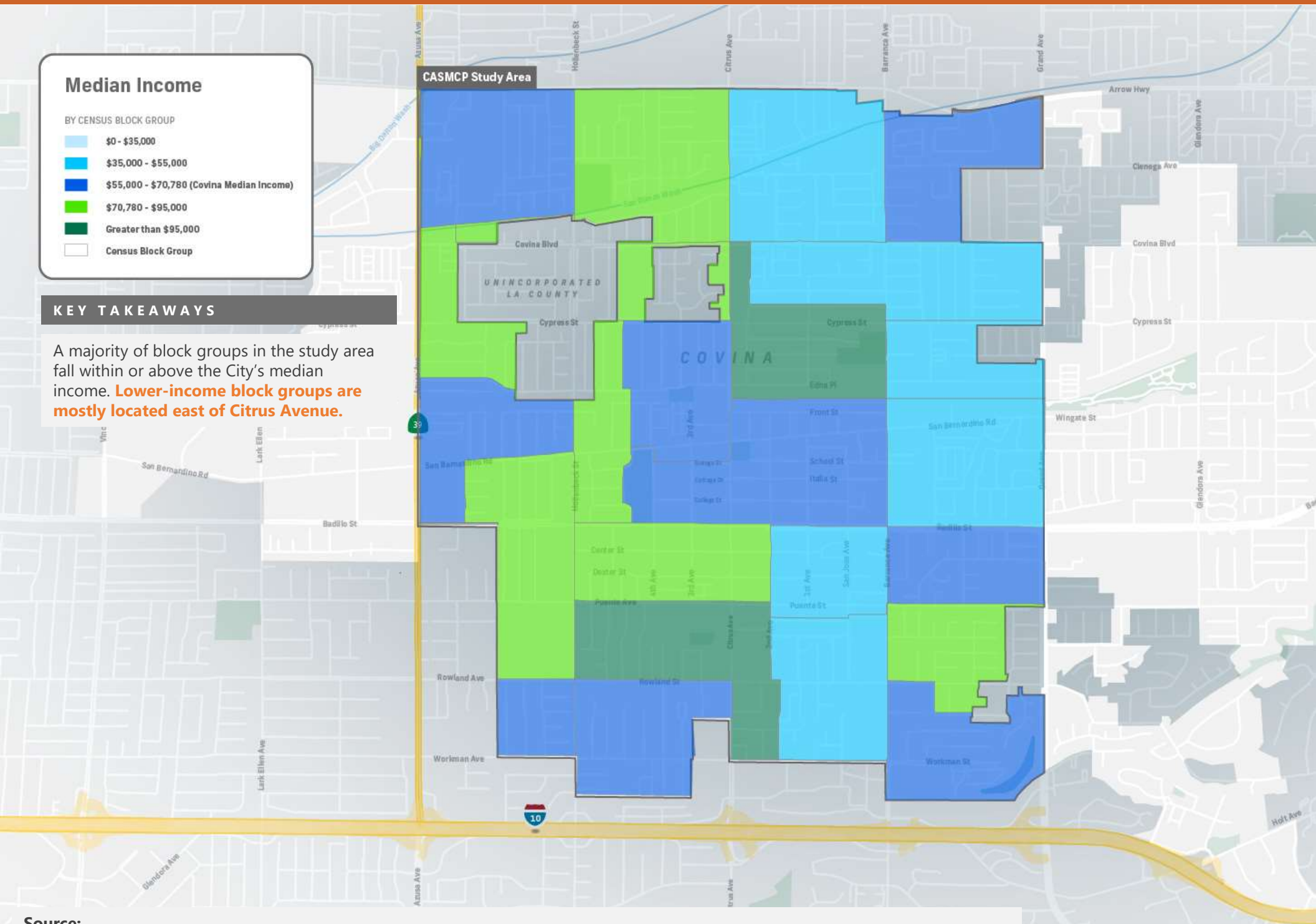
Median Income

BY CENSUS BLOCK GROUP



KEY TAKEAWAYS

A majority of block groups in the study area fall within or above the City's median income. **Lower-income block groups are mostly located east of Citrus Avenue.**



Sensitive Communities (Urban Displacement Project)

BY CENSUS TRACT

- Vulnerable to Displacement
- Disadvantaged Community

KEY TAKEAWAYS

Two census tracts in the study area contain "Sensitive Communities". A "Sensitive Community" is defined as having a large proportion of very low-income residents, renters, people of color, and rent increases above the county median.

One census tract is a designated "Disadvantaged Community". "Disadvantaged Communities" are defined as those disproportionately affected by a combination of economic, health, and environmental burdens. These communities have a CalEnviroScreen score in the 75th percentile or higher.

For more information on these data sources and their associated indicators, please see the Equity Technical Study included as an appendix.

CASMCP Study Area

UNINCORPORATED LA COUNTY

COVINA

Source:

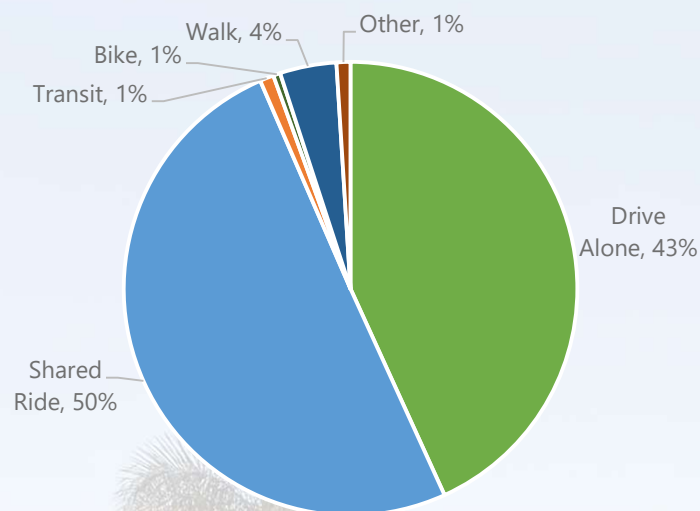
California Department of Housing and Community Development, AFFH Data Viewer; UC Berkeley Urban Displacement Project (UDP)

Covina is an **auto-oriented community**, with 75% of commuters choosing to drive alone.

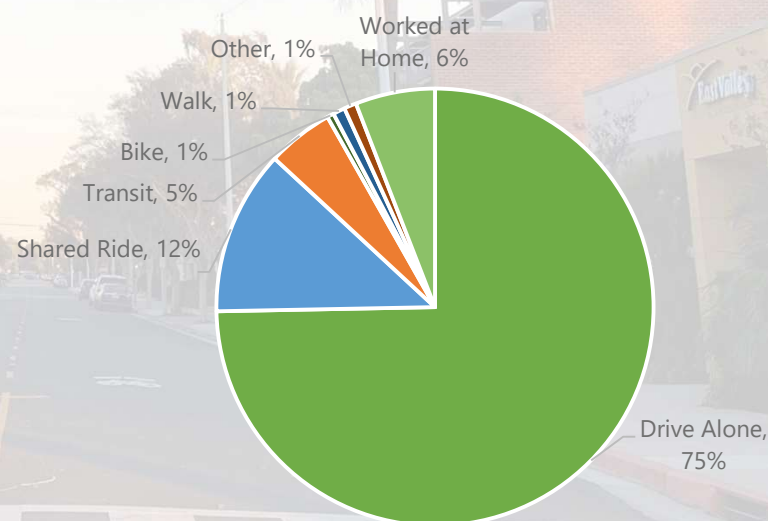
However, almost 20% of commute times in Covina are less than 15 minutes. These shorter trips could present an **opportunity for mode shift** if safe, comfortable, and reliable biking and transit options were provided.

People may also prefer not to drive for local trips to schools, parks, or shopping, but don't currently feel they have a viable alternative.

All Trips Mode Share



Commute Mode Share



Source:

Journey to work mode split, *Census*
Households without vehicles, *Census*
Overall mode split, *California Household Travel Survey*

A community survey was developed to understand existing mobility patterns and preferences throughout the study area. The survey was live from August through October 2022. 58 responses were received. Key takeaways from the survey are included below. More details on the survey are included in Appendix A and B.

PRIMARY CONCERNS



- » Safety
- » Inadequate crosswalks
- » Comfort/lack of shade

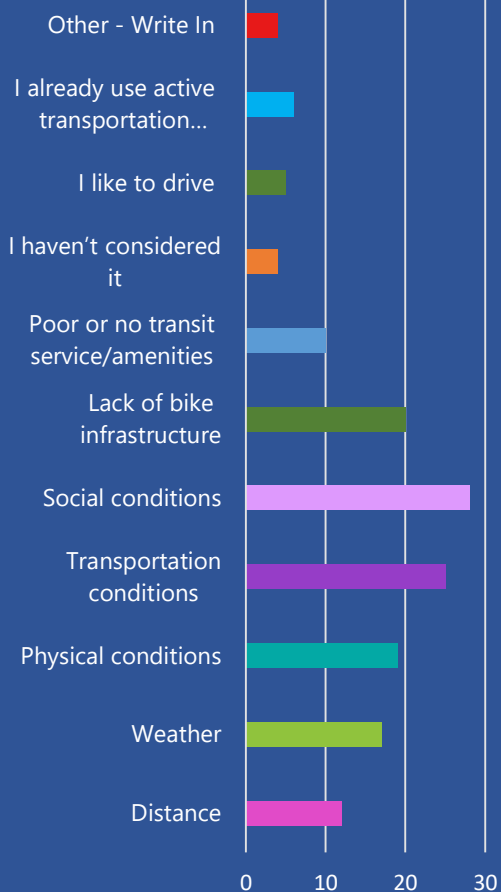


- » Safety
- » Security/ bike friendly infrastructure

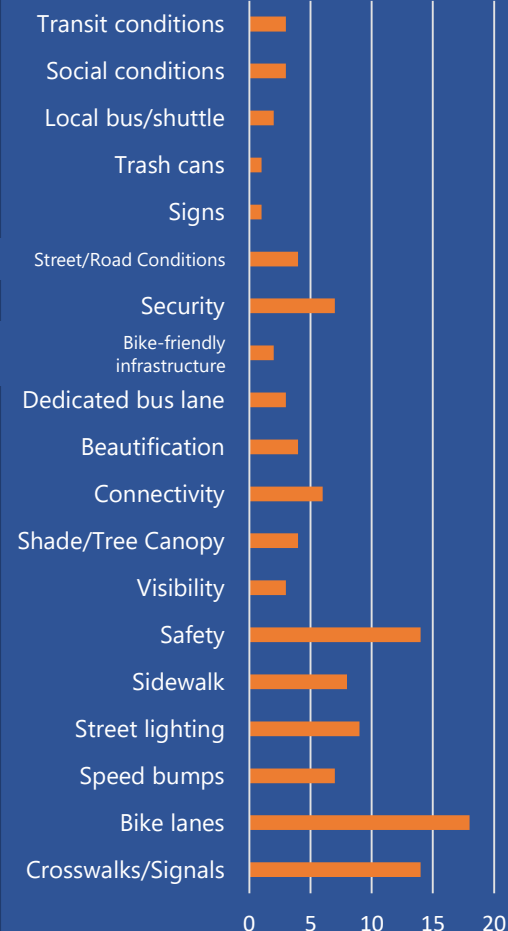


- » Safety
- » Reliability/convenience

BARRIERS TO WALKING & BIKING



DESIRED IMPROVEMENTS



Covina has a very **balanced employment ratio**, with almost just as many workers commuting into Covina as out.

Approx. **7% of residents/workers stay within the City**, while the vast majority commute to/from other locations

Worker Inflow/Outflow (2019)



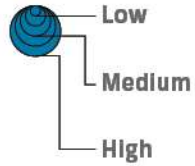
Source:

U.S. Census Bureau Center for Economic Studies (2019)
More information on commute travel patterns can be found in the Market Technical Study.

Ridership On

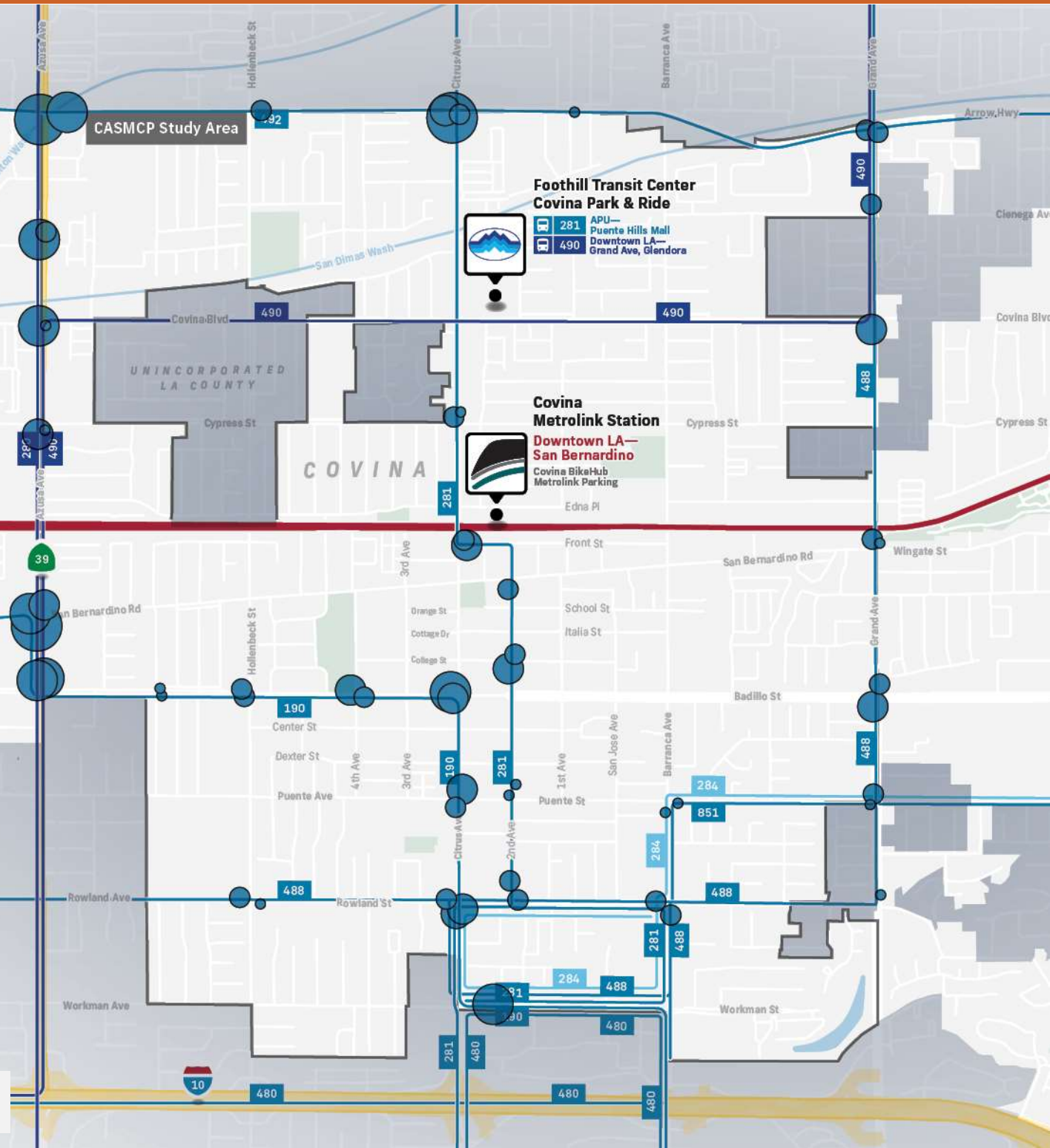
- Bus Stops

On/Off Ridership



KEY TAKEAWAYS

The study area's most **active bus stops** are along its periphery on Azusa Avenue and Arrow Highway. The Azusa Avenue corridor provides direct access to the Azusa L (Gold) Line Station to the north.



Existing Transportation Facilities

Pedestrian facilities

Bike facilities

Transit lines/stops

Tree canopy

Major road right-of-way (ROWs)

Crosswalks & Sidewalk Gaps

- Uncontrolled Crosswalk
- Stop-Controlled Crosswalk
- Signalized Crosswalk
- Sidewalk Gap

KEY TAKEAWAYS

80% 233 of 292 total

Of crosswalks are controlled (either by stop control or signals)

100% 49 of 49 total

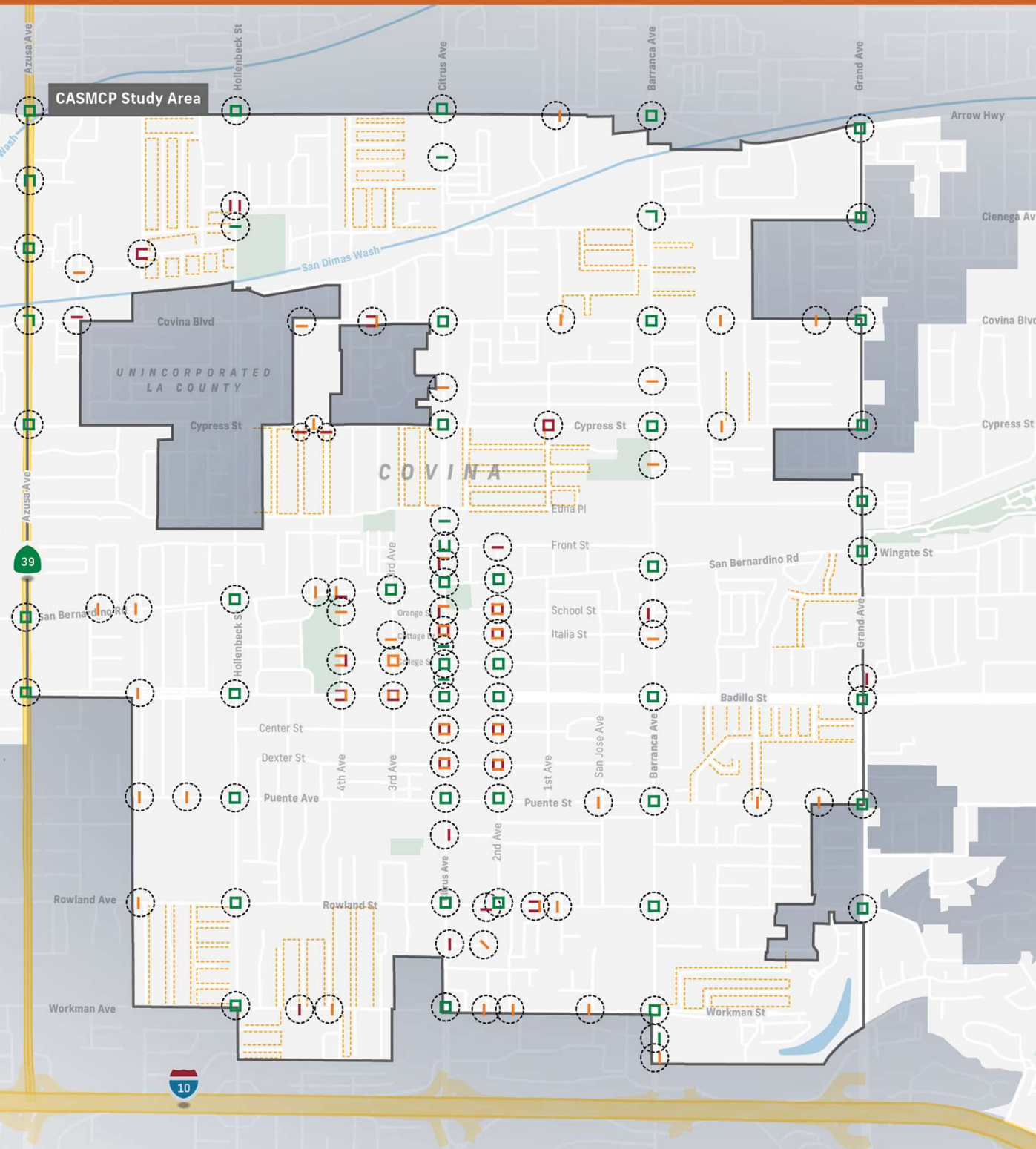
Of signalized intersections with marked crosswalks along at least one leg

86% 42 of 49 total

Of signalized intersections with marked crosswalks on all legs

Ongoing sidewalk and crosswalk improvements include:

- **Sidewalk improvements** on Workman Street between Citrus Avenue and Hollenbeck Avenue
- **Crosswalk upgrades** at two midblock crosswalks on College Avenue (near Badillo Street and Orange Street), including installation of in-pavement flashers





Badillo Street/Amel Drive
Multi-lane uncontrolled crosswalk with high-visibility crosswalk striping



College Street/3rd Avenue
All-way stop control with standard crosswalk striping



Puente Street near Sierra Middle School
Pedestrian flashers ahead of an unsignalized crosswalk. Limited visibility of the specific crosswalk location due to faded pavement markings.



Midblock on Citrus Avenue
Decorative uncontrolled midblock crosswalk near downtown



Italia Street/2nd Avenue
Side-street stop control with standard crosswalk striping. Pedestrians cross six lanes of traffic.



Midblock on Rowland Avenue
Pedestrian crossing signage in a school zone with limited visibility of the specific crosswalk location due to faded pavement markings.

Existing Bike Facilities

BY CLASSIFICATION

- Bike Lanes
- ⋯ Bike Routes with Sharrows

KEY TAKEAWAYS

90 miles of roadway

3.6 miles of Class II bike lanes

1.2 miles of Class III bike routes with sharrows

0.75 miles of planned Class II bike lanes on Citrus Avenue between Badillo Street and Workman Street

There are opportunities to enhance both the **connectivity and comfort** of bike facilities by identifying a **low-stress network** throughout the study area.

This could include adding new facilities on **key arterials and collectors**, identifying critical **neighborhood streets**, and **enhancing existing facilities**.

CASMCP Study Area

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COVINA

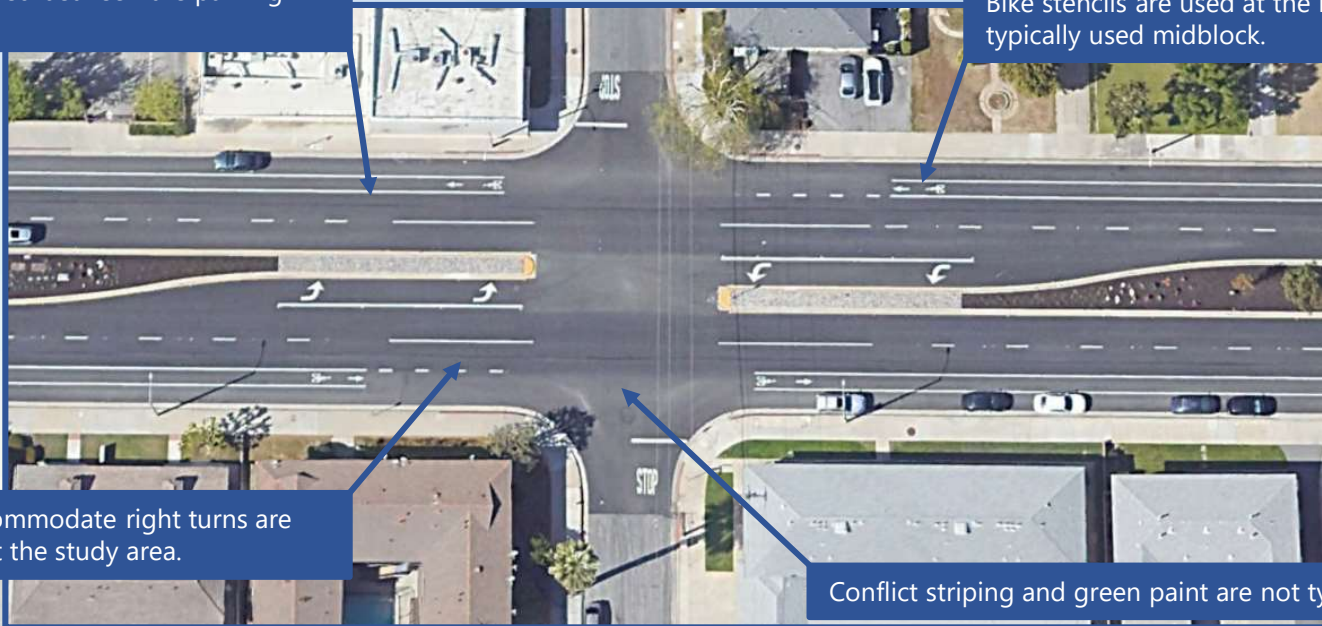
10

Bike lanes in the study area are typically 5-6 feet in width and positioned between the parking lane and auto lanes.

Bike stencils are used at the intersection, but not typically used midblock.

Mixing zones to accommodate right turns are common throughout the study area.

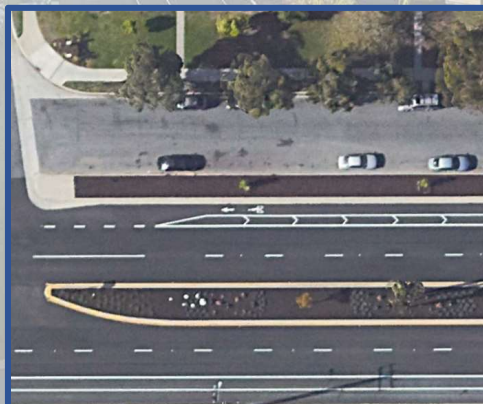
Conflict striping and green paint are not typical



Other Bike Treatments in the Study Area



Front Street/2nd Street
Green bike boxes



Badillo Street
Buffered Bike Lanes



2nd Street
Bike Route signage

Transit Facilities

 **Metrolink**
Downtown LA—San Bernardino

 **Covina Metrolink Station**  
includes bike parking, station parking lot
& parking structure

 **Foothill Transit Center** 
includes parking structure

FOOTHILL TRANSIT ROUTES BY FREQUENCY

 **15 minutes**

280 490

 **20-30 minutes**

190 281 480 488 492
851 851 operates peak hours only

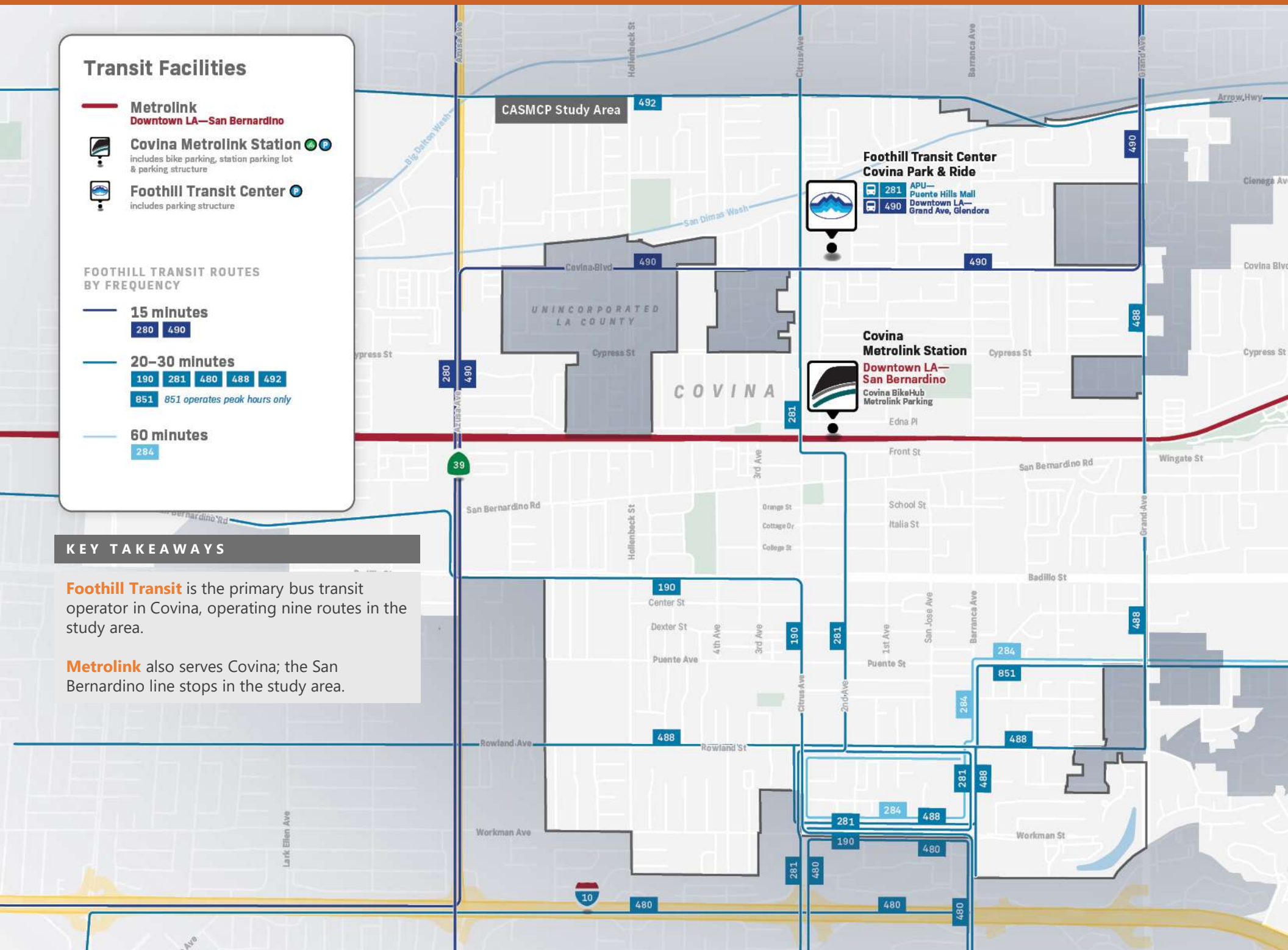
 **60 minutes**

284

KEY TAKEAWAYS

Foothill Transit is the primary bus transit operator in Covina, operating nine routes in the study area.

Metrolink also serves Covina; the San Bernardino line stops in the study area.






Existing Transportation Facilities Transit Service Headways and Hours of Operation

Route	Route Name	Weekday			Weekend/Holiday		
		<i>Peak</i>	<i>Off-Peak</i>	<i>Hours</i>	<i>Peak</i>	<i>Off-Peak</i>	<i>Hours</i>
<u>190</u>	El Monte - West Covina - Pomona	20	30	5am-1am	30-60	60	6am-1am
<u>280</u> *	Azusa - Puente Hills Mall via Azusa Ave	15*	20	5am-12pm	30	30	6am-11pm
<u>281</u>	Glendora - Azusa - West Covina - Puente Hills Mall	30	30	5am-10pm	60	60	6am-8pm
<u>284</u>	West Covina - Covina - San Dimas - Glendora	60	60	6am-9pm	45	90	6am-6pm
<u>480</u>	Montclair - Pomona - West Covina via Mission Blvd	20	30	5am-12am	30	60	5am-12am
<u>488</u>	Glendora - West Covina - El Monte	25	60	4am-10pm	60	60	7am-11pm
<u>490</u> *	Grand Ave. Park & Ride - Covina Transit Center - Downtown Los Angeles Express Service	15*	30	5am-8pm		n/a	
<u>492</u>	Montclair - Arcadia - El Monte via Arrow Hwy	20	30	5am-11pm	30	30	6am-11pm
<u>851</u>	Covina - Glendora	30 – peak only	n/a	7am-4pm		n/a	
<u>Metrolink</u>	San Bernardino	25	60	5am-10pm	60	120	7am-10pm

Source: Foothill Transit November 2021 Timetables; Metrolink April 2022 Timetables

***High Frequency Routes** are routes with 15 minutes or better frequency during weekday service

Transit Stop Amenities

-  Bus Stops with Bench & Shelter
-  Bus Stops with Bench
-  Bus Stops with No Amenities

KEY TAKEAWAYS

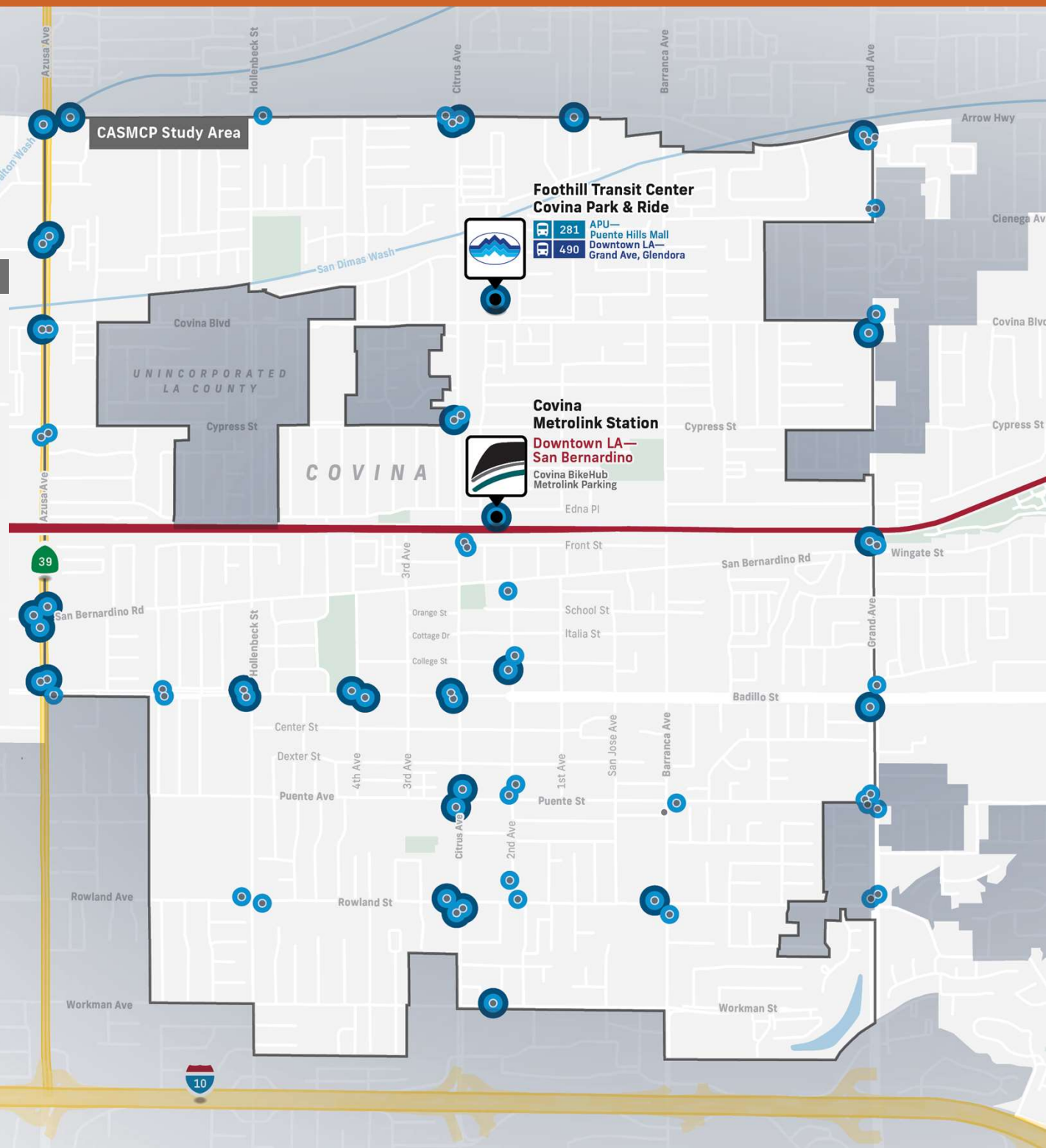
97% 65 of 67 total
Of Stops have a **place to sit** (bench or shelter)

51% 34 of 67 total
Of stops have **shade** (shelter)

<1% 2 of 67 total
Of stops have no amenities

Ongoing transit stop improvements include:

- Installation of **five new bus shelters** on Grand Avenue



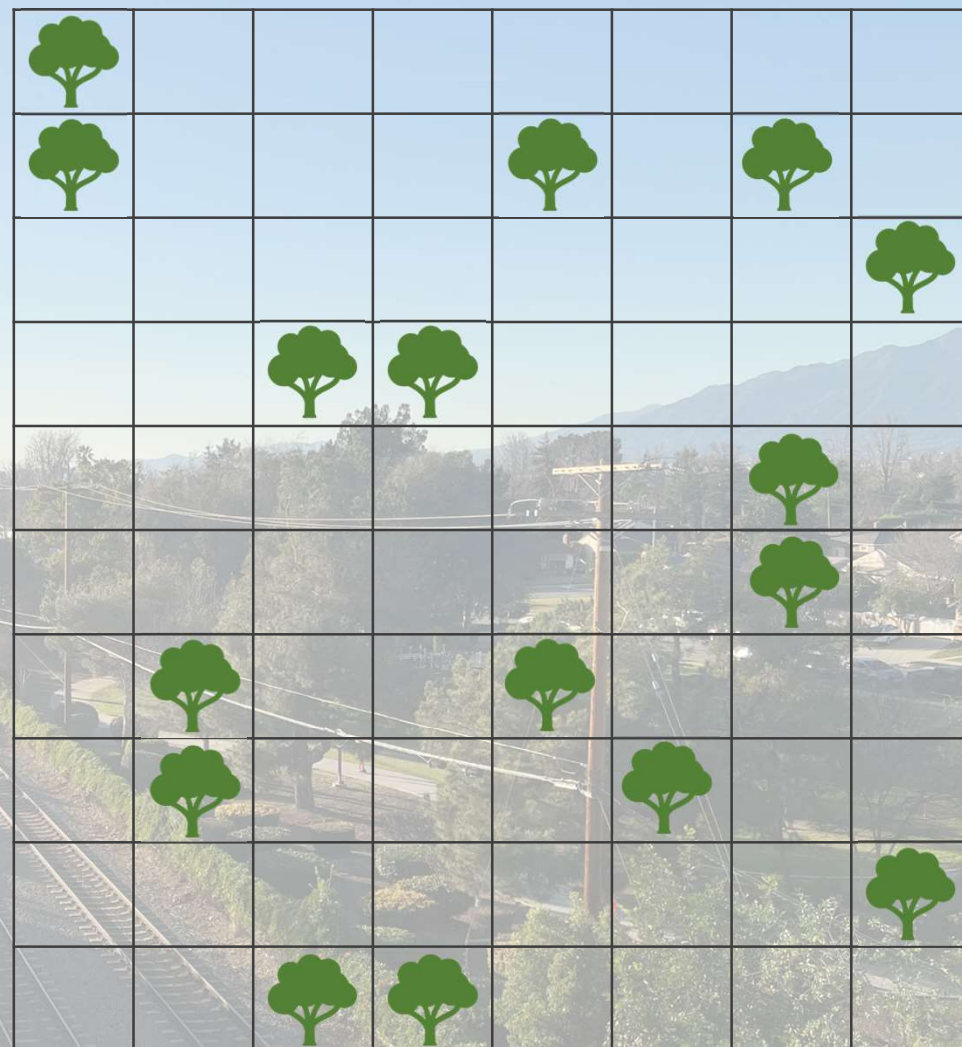
The City of Covina has a **16% tree canopy coverage**, compared to the County average of 20%.

The **average August temperature** in Covina is 91°.

90° is the threshold for “**extreme heat conditions**”, requiring your body to work extra hard to maintain normal temperatures.

There is a critical opportunity to **expand shade coverage** to provide relief for people walking, biking, and waiting for transit.

Planting new trees would require **utility and maintenance** coordination to ensure new trees don't conflict with existing utility locations and can be watered regularly.



Source:

Los Angeles County Tree Canopy Map Viewer (Tree People)
Weather Spark Climate Comparison
[Ready.gov/heat](https://ready.gov/heat)



Excess roadway capacity along major arterials can lead to increased speeds and limited spaces for people to walk and bike.



Concrete center medians typically lack green space or placemaking and increase the impermeable surface of the roadway, placing an increased burden on stormwater systems.



Similarly, frontage roads tend to lack green space and placemaking amenities.



Right-turn merge lanes and wide curb radii increase crossing distances for pedestrians and allow for high speeds of turning vehicles.



Rebalancing the right-of-way can help create protected facilities and increased green infrastructure.



Center medians can be redesigned to provide natural habitat, placemaking, and green stormwater infrastructure.



Small, narrow spaces can be repurposed to provide pedestrian walking paths, tree canopy, and open space.



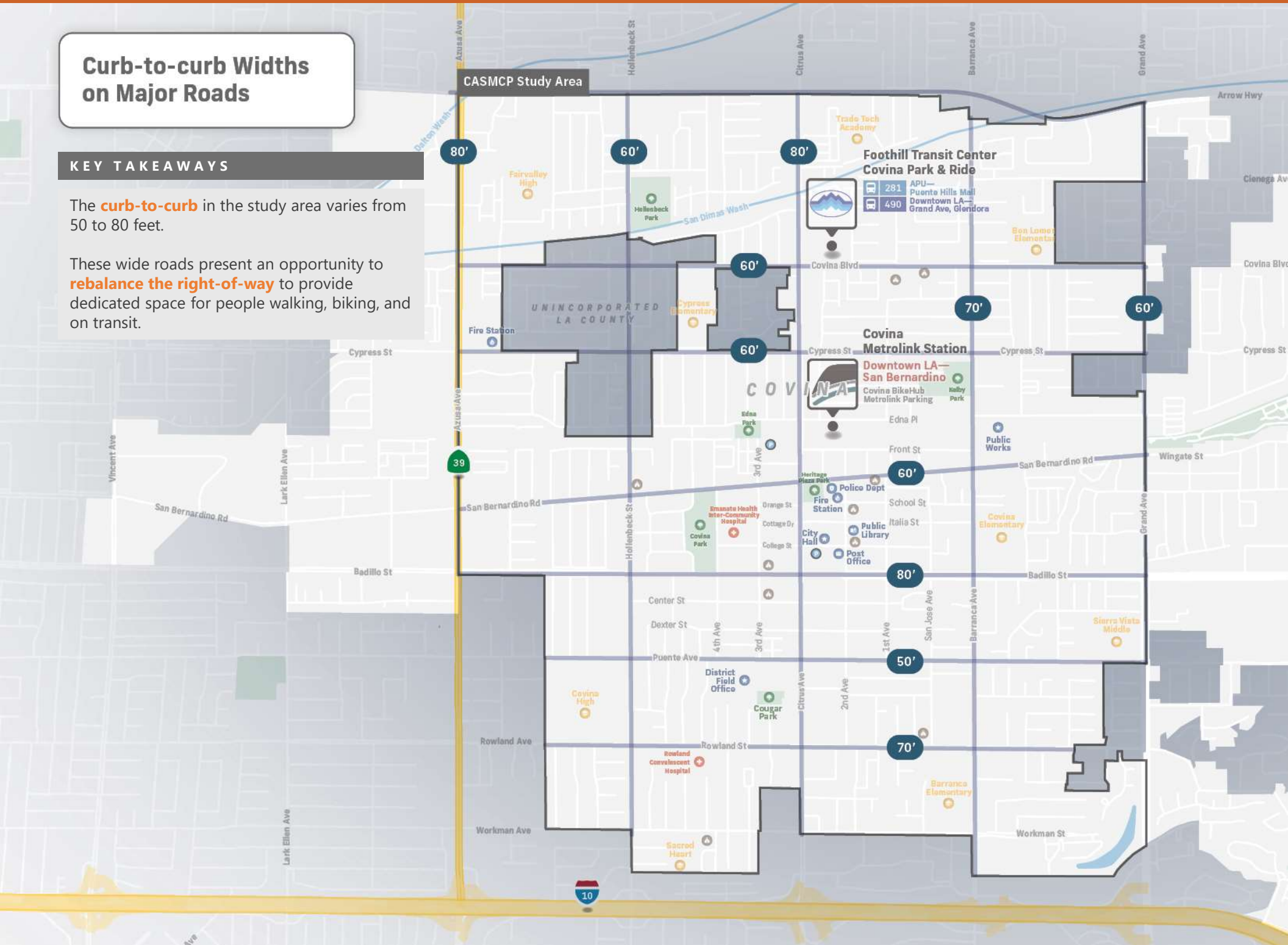
Curb extensions can be added to shorten pedestrian crossing distances, slow vehicle turning movements, and provide green infrastructure.

Curb-to-curb Widths on Major Roads

KEY TAKEAWAYS

The **curb-to-curb** in the study area varies from 50 to 80 feet.

These wide roads present an opportunity to **rebalance the right-of-way** to provide dedicated space for people walking, biking, and on transit.



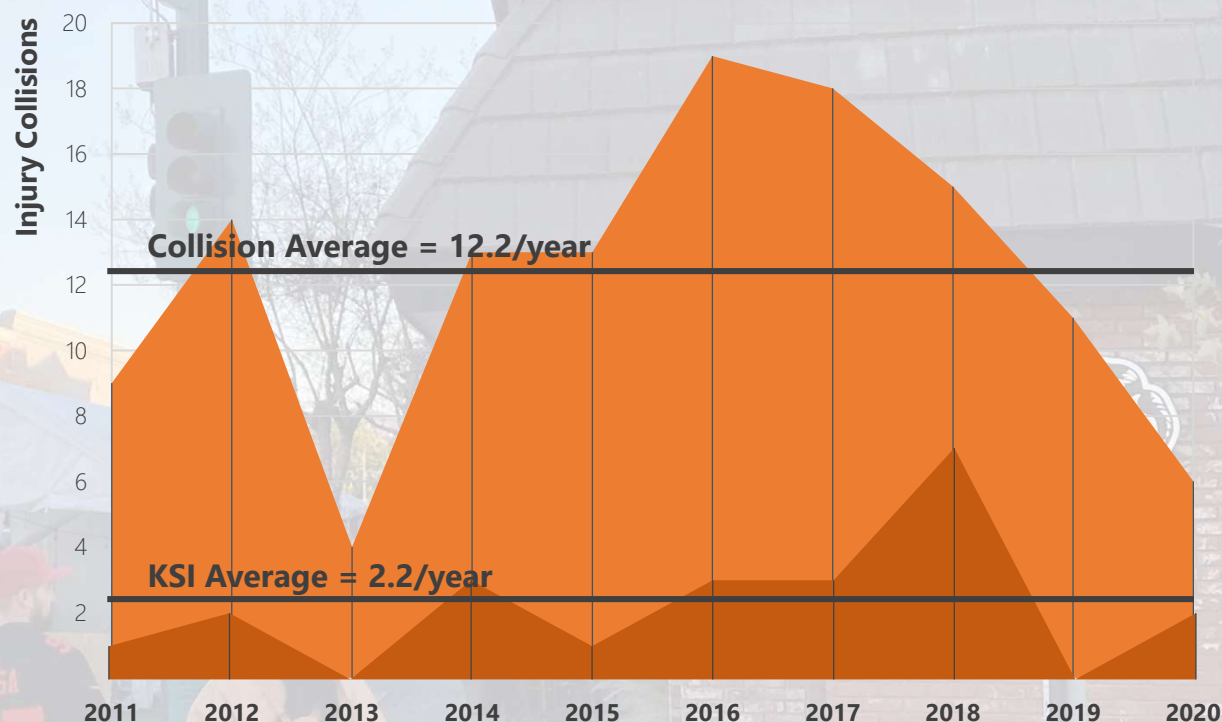
Pedestrian and Bike Comfort and Safety

Pedestrian safety
Bike safety
Wejo speed data

There were 122 reported **pedestrian injury collisions** in the study area between 2011 and 2020.

Killed and Severely Injured (KSI) collisions are collisions that resulted in a fatality or life-altering injury.

While there has been a downward trend in total injury collisions since 2016, KSI collision trends have not seen that same trend.



Existing Facilities

Source:

Transportation Injury Mapping System (TIMS), 2011-2020
Note that 2020 data is provisional.

Pedestrian Collisions

BY SEVERITY, 2011-2020

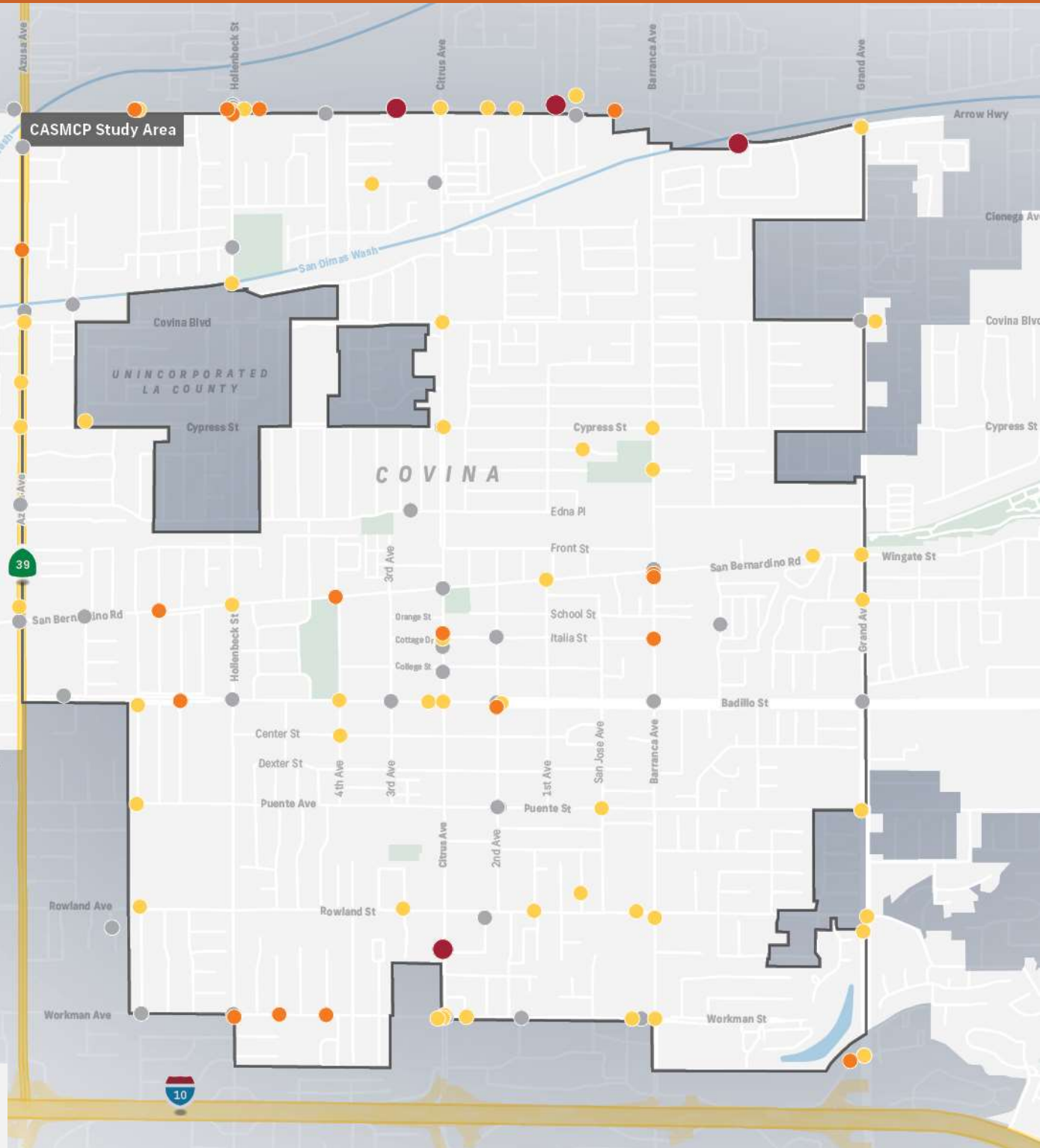
- Fatal
- Severe Injury
- Other Visible Injury
- Complaint of Pain

KEY TAKEAWAYS

Of the 122 injury pedestrian collisions, **64% occurred at an intersection.**

9 of the 29 injury collisions where the pedestrian was **"crossing not in a crosswalk" occurred at an intersection.**

Pedestrian Action	%
Crossing in Crosswalk at Intersection	56%
Crossing in Crosswalk not at intersection	3%
Crossing Not in Crosswalk	27%
In Road, Including Shoulder	8%
Not in Road	5%
Not Stated	1%



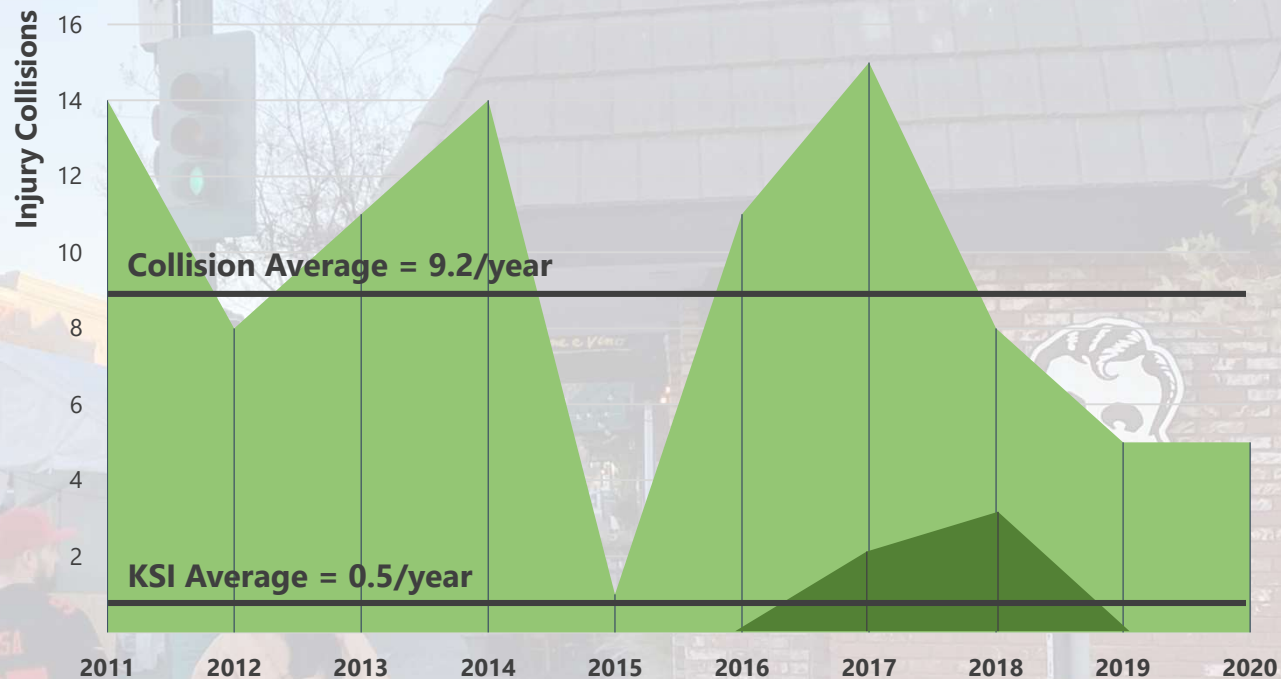
Source:

Transportation Injury Mapping System (TIMS), 2011-2020
Note that 2020 data is provisional.

There were 92 reported **bicycle injury collisions** in the study area between 2011 and 2020.

While there has been a downward trend in total injury collisions since 2017, KSI collision trends have not seen that same trend.

There have been no bike-involved fatalities over the ten-year period in the study area.



Source:

Transportation Injury Mapping System (TIMS), 2011-2020
Note that 2020 data is provisional.

Bicycle Collisions

BY SEVERITY, 2011-2020

- Fatal (None)
- Severe Injury
- Other Visible Injury
- Complaint of Pain

KEY TAKEAWAYS

63% of bicycle collisions occurred at intersections.

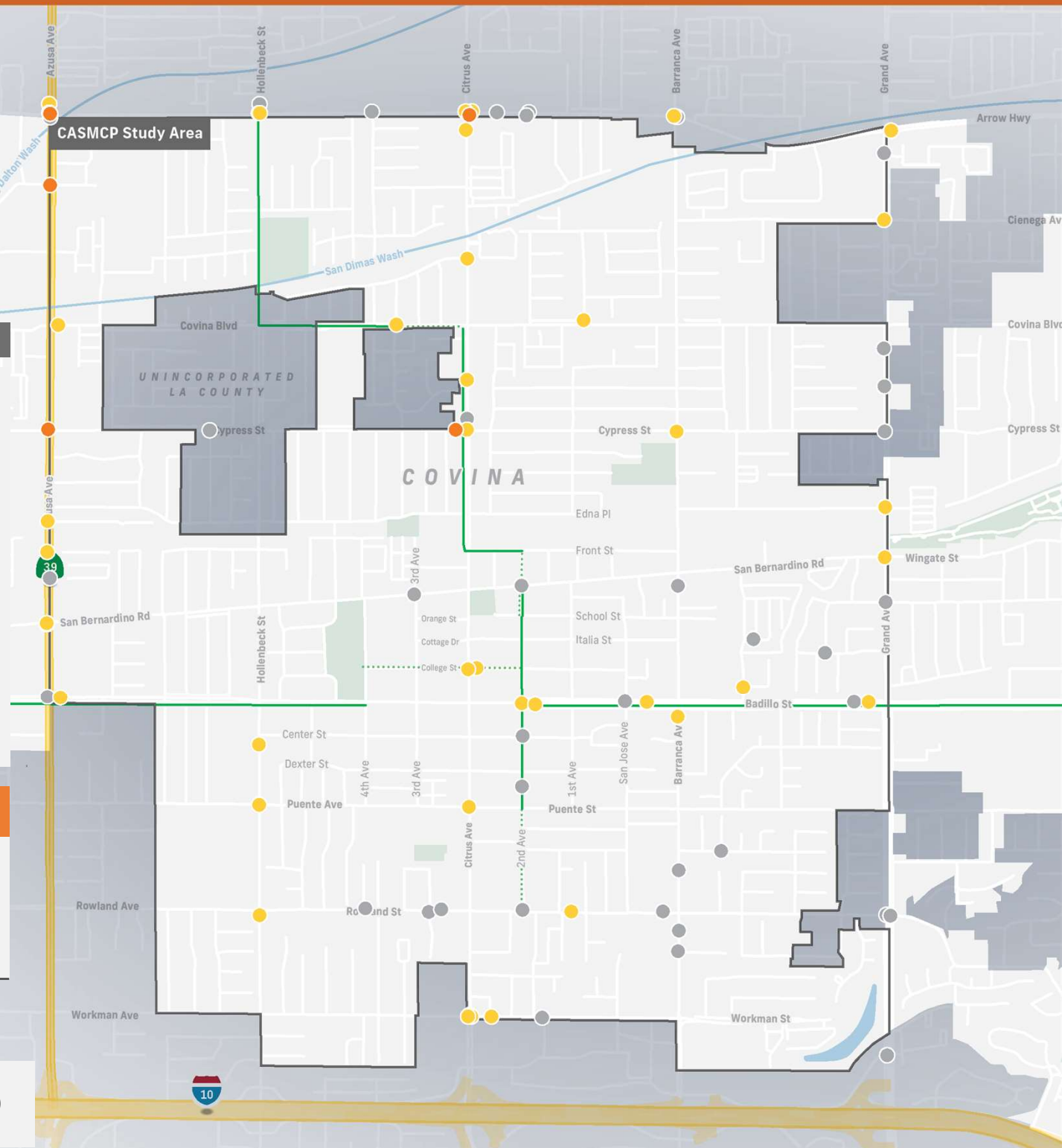
28% occurred on a street with an existing dedicated bike facility despite just 5% of roads having facilities, suggesting that more robust treatments may be needed.

“Wrong side of road” collisions occur when a bicyclist is biking contraflow to traffic, either in the roadway or on the sidewalk. This commonly occurs when the on-road bicycle facility is uncomfortable, and bicyclists want to be able to see the cars ahead of them. Education, encouragement, and enhanced bike facilities can help mitigate this behavior.

Top 5 Primary Collision Factors (PCF) %

Wrong Side of Road	47%
Vehicle Right of Way Violation	12%
Traffic Signals and Signs	11%
Improper Turning	9%
Other Hazardous Violation	7%

CASMCP Study Area



Source:

Transportation Injury Mapping System (TIMS), 2011-2020
Note that 2020 data is provisional.

Weekday Daily Speed Data

WEJO DATA



KEY TAKEAWAYS

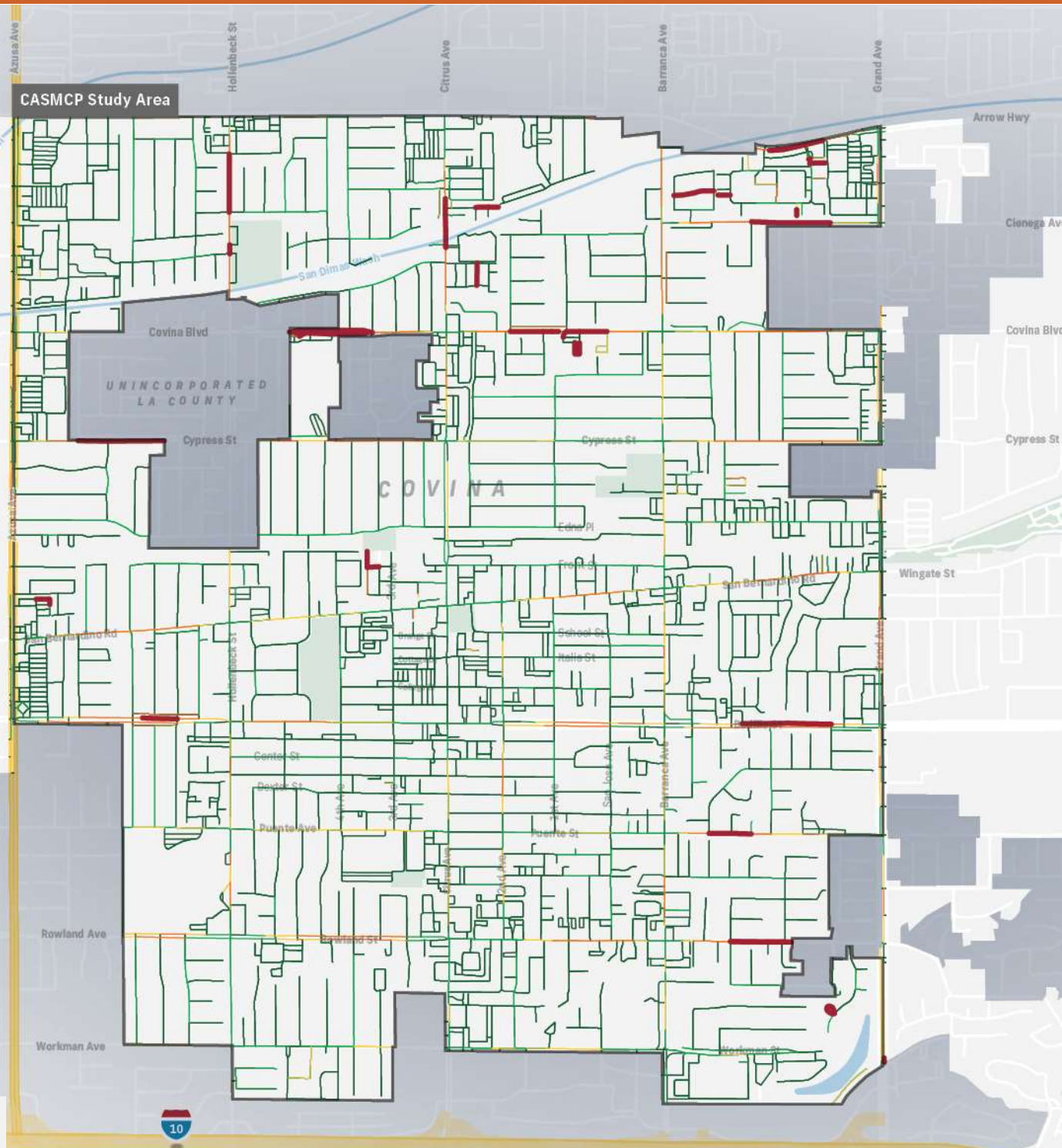
Speed is the most significant factor in determining severity of collisions. As speed increases, so does the likelihood of a serious injury or fatality.

As speed increases from 20 miles per hour (MPH) to 40 MPH, the likelihood of a pedestrian surviving a crash drops from 90% to 20%.

Speed management will be an important focus in creating safe and comfortable pedestrian and bicycle facilities.

There are a handful of residential roadway segments shown on the map where data shows average speeds beyond 40 MPH. We would like to explore further with the City the feasibility of speeding on these segments, or if this is data noise.

CASMCP Study Area



Source:

Wejo Data, 2019.
ITE Safe Systems Framework

Weekday Overnight Speed Data

WEJO DATA

- <20 MPH
- 20 to 30 MPH
- 31 to 35 MPH
- 36 to 40 MPH
- >40 MPH

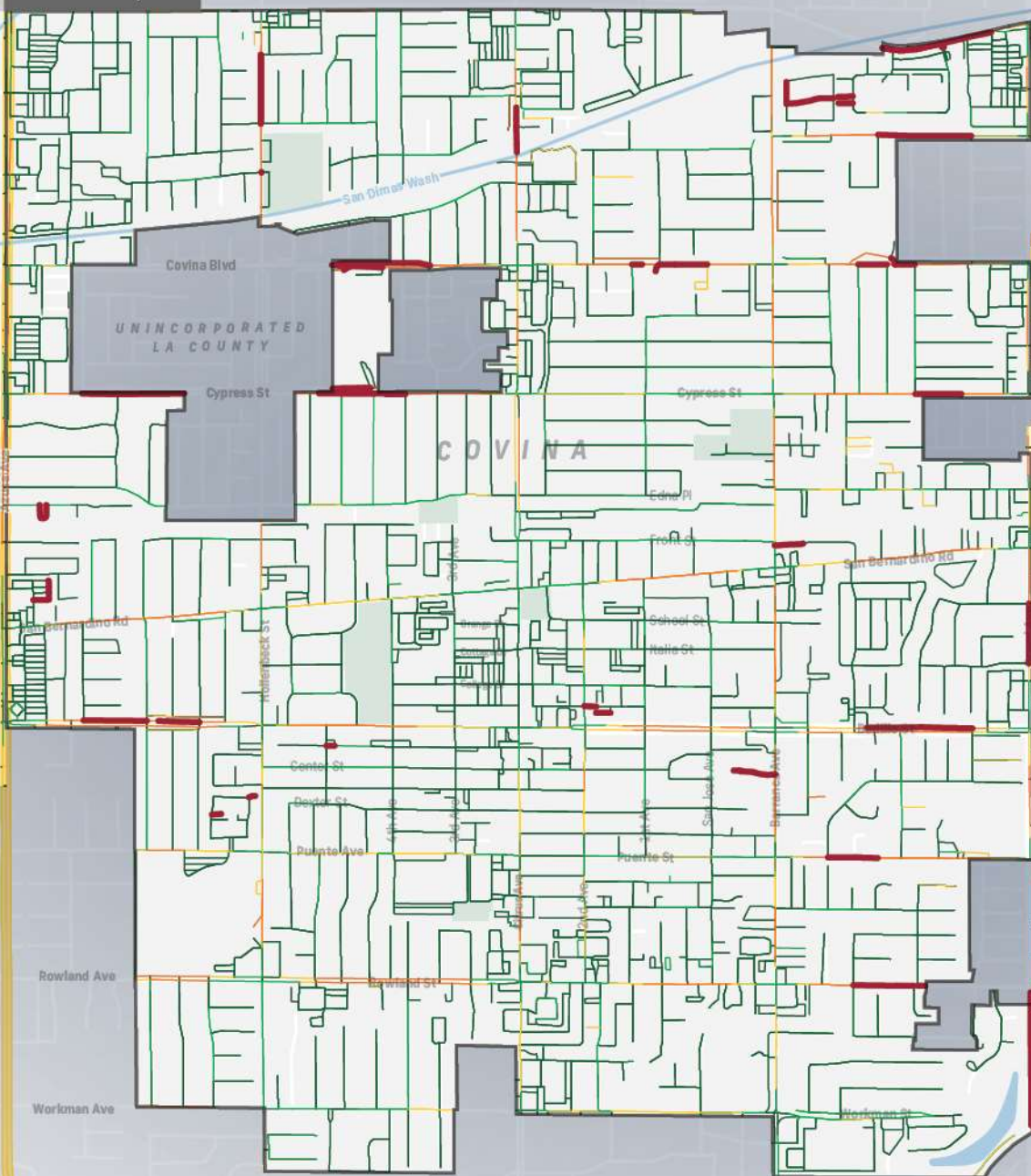
KEY TAKEAWAYS

The number of high-speed segments where the average speed is 40 MPH or more increases in the **overnight hours** and **over the weekend** when streets are less congested.

There are a handful of residential roadway segments shown on the map where data shows average speeds beyond 40 MPH. We would like to explore further with the City the feasibility of speeding on these segments, or if this is data noise.

Existing Facilities

CASMCP Study Area



Weekend Daily Speed Data

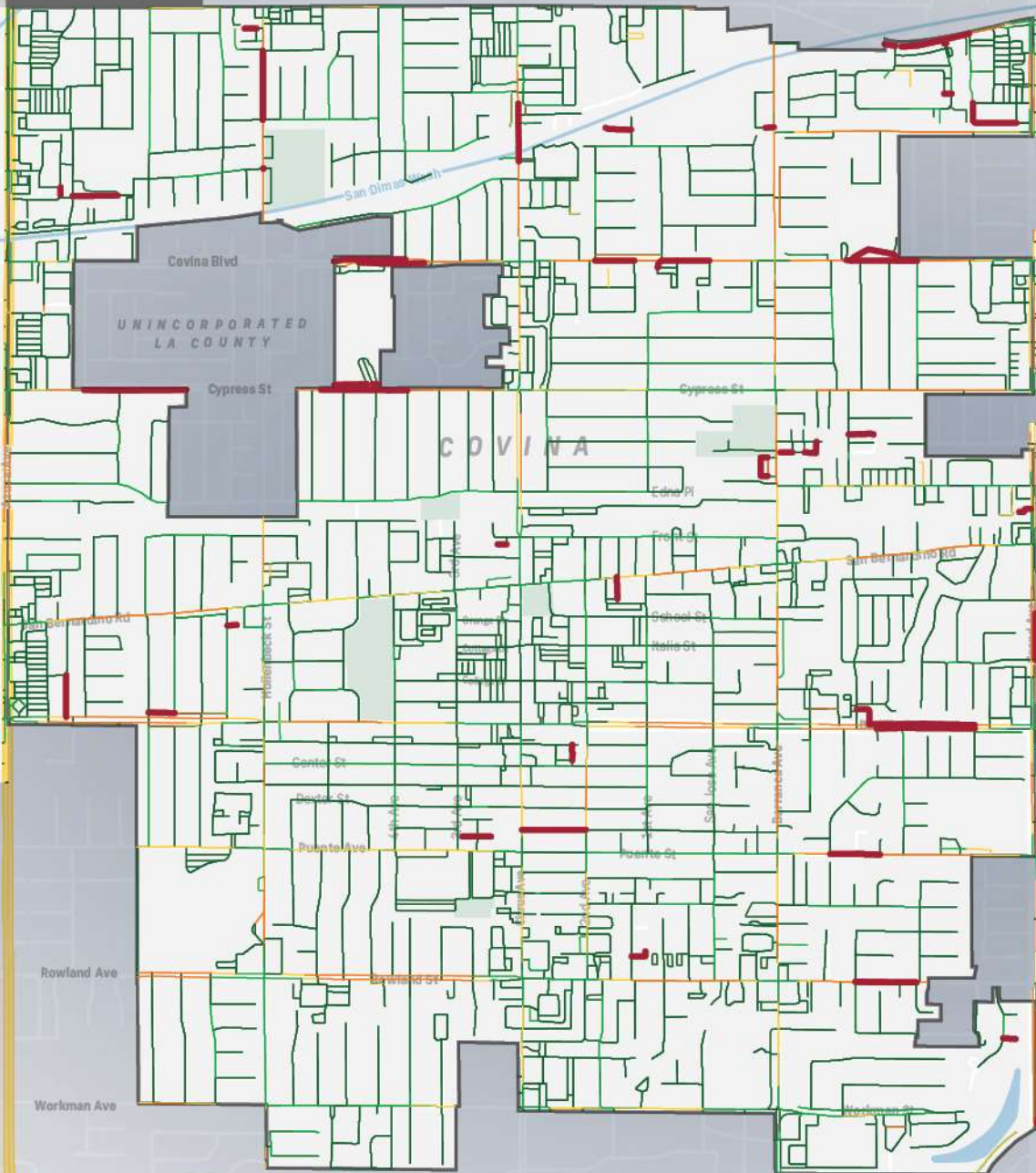
WEJO DATA

- <20 MPH
- 20 to 30 MPH
- 31 to 35 MPH
- 36 to 40 MPH
- >40 MPH

There are a handful of residential roadway segments shown on the map where data shows average speeds beyond 40 MPH. We would like to explore further with the City the feasibility of speeding on these segments, or if this is data noise.

Existing Facilities

CASMCP Study Area



Major Destinations & Accessibility

Key districts in the study area

Transit accessibility

Location of top employers

Access to grocery stores & parks

Economic development corridors and Transit-Oriented-Development sites

Districts

- Covina Town Square
- Health Services
- Downtown
- Auto Dealerships
- Industrial Park
- Business Park

KEY TAKEAWAYS

Covina Town Square | Several shopping centers within this area. There are also a few adjacent multi-family residential developments such as the Nantucket Village and Covina Grand Apartments

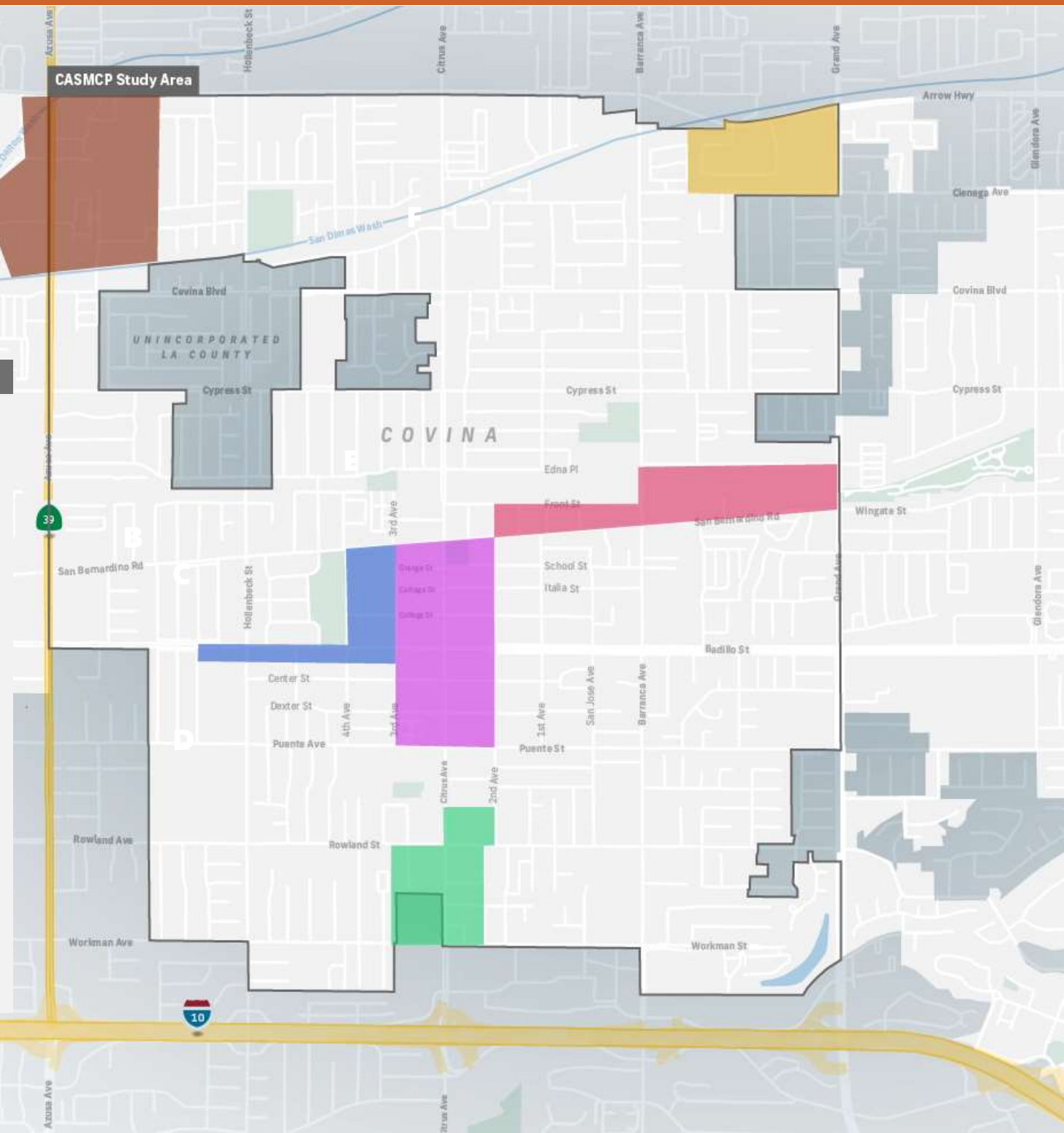
Health Services | Location of local hospital and several dental and health clinics

Downtown | Small retailers and local restaurants. Has a more walkable and pedestrian-oriented environment. Also contains several civic facilities (library, city hall) and museums.

Auto Dealership | Location of several auto dealerships (Chevrolet, Kia, Buick), light auto repair services, such as oil changes, and car rentals.

Industrial Park | Heavier industrial uses including auto body repair shops.




Business Park | Several offices in light manufacturing and professional services. Also contains Arrow Lodge Brewing.



5-Minute (1/4-Mile) Walk Shed

From Bus Stops

BUS STOPS BY AMENITIES

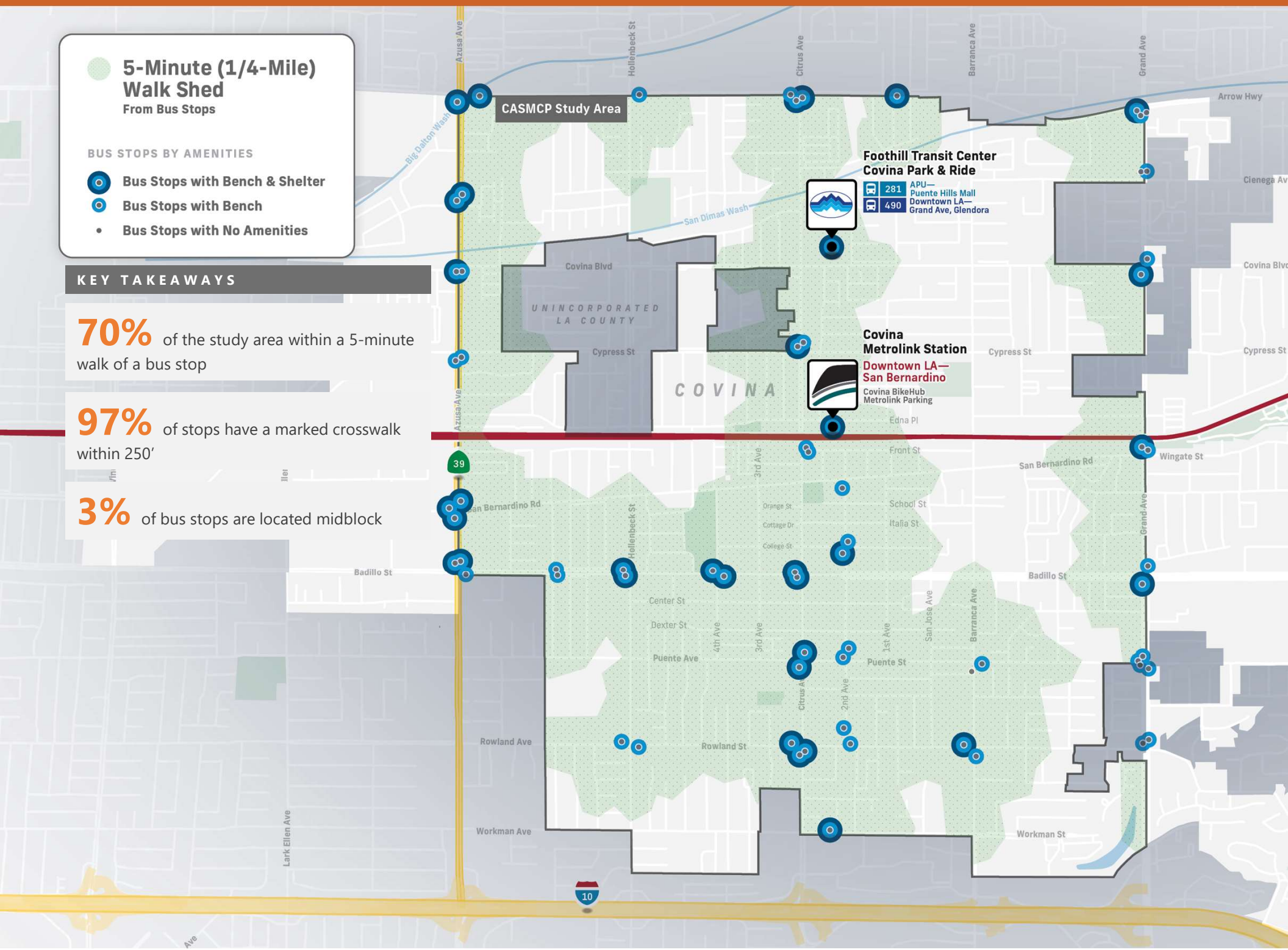
-  **Bus Stops with Bench & Shelter**
-  **Bus Stops with Bench**
-  **Bus Stops with No Amenities**

KEY TAKEAWAYS

70% of the study area within a 5-minute walk of a bus stop

97% of stops have a marked crosswalk within 250'

3% of bus stops are located midblock

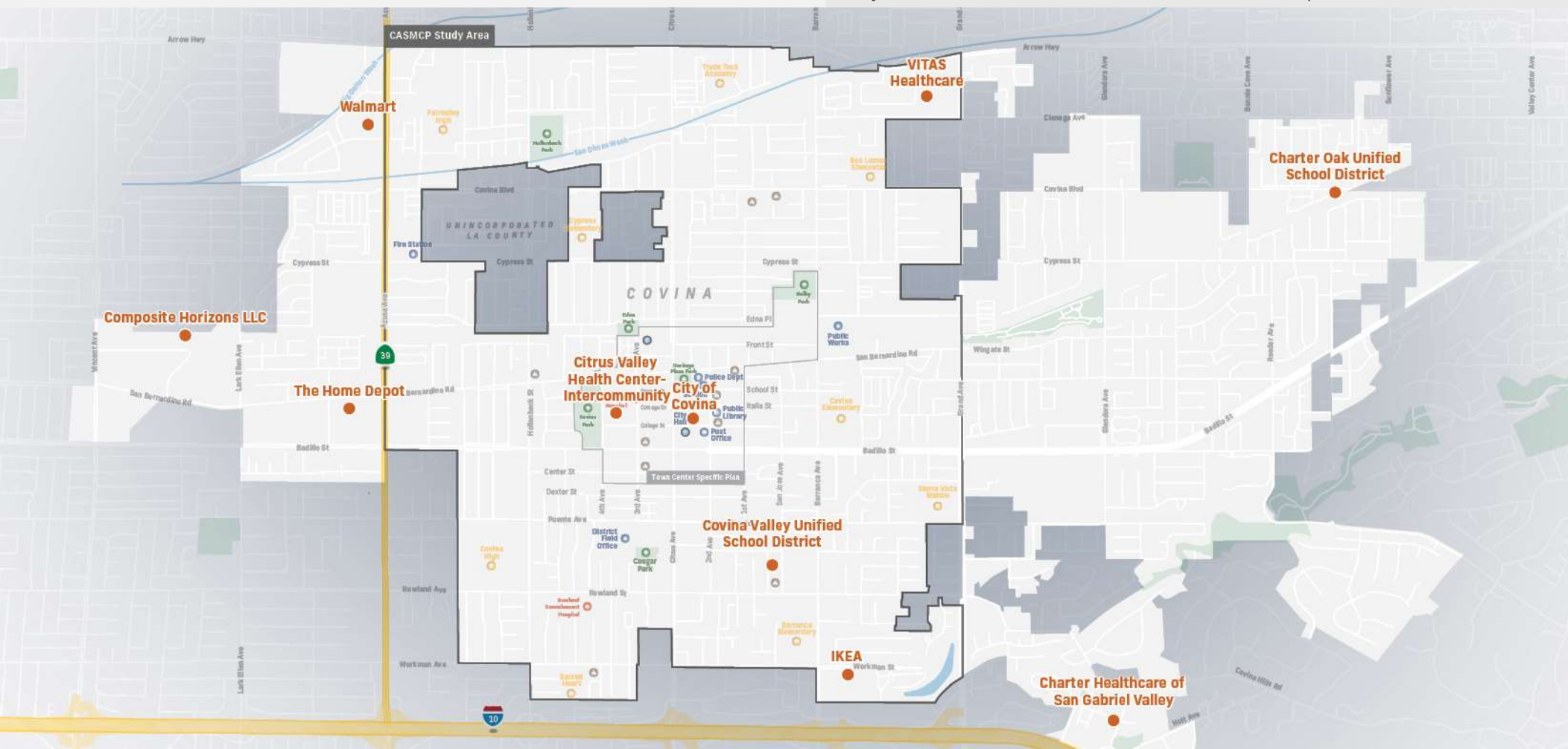


Major Destinations & Accessibility Top Employers

Among the top ten employers in the City, three are healthcare related, three are school districts / local government, three are major big box retailers, and one is an aerospace components firm.

Five of these major employers have operations within the CASMCP area, with several others located just outside of CASMCP boundaries, suggesting workers at these firms could benefit from active transportation improvements.

Employer	Sector	Employees
Covina Unified School District	<i>Education</i>	1,365
Citrus Valley Health Partners – Intercommunity	<i>Healthcare</i>	829
Charter Oak Unified School District	<i>Education</i>	630
Charter Healthcare of San Gabriel Valley	<i>Healthcare</i>	535
Ikea	<i>Retail</i>	325
Walmart	<i>Retail</i>	265
City of Covina	<i>Government</i>	244
VITAS Innovative Hospice Care	<i>Healthcare</i>	221
The Home Depot	<i>Retail</i>	211
Composites Horizons LLC	<i>Aerospace</i>	204



Park Access



Parks and Open Space



Not Accessible to Park*
(More than 1/2 mile from park or open space)

*Note: these areas have residential density
>1,000 people per sq mi

Grocery Store Access



Grocery Store



Not Accessible by Walking
(More than 1/2 mile radius of grocery store)

KEY TAKEAWAYS

75% of the study area is within a 1/2-mile radius from either recreational space or grocery stores.

While a 1/2-mile to 1-mile may be too far to walk for some pedestrians, that is just a two-to-four-minute bike ride for the average rider. There are opportunities to **promote access to these destinations** by providing direct bicycle connections.

CASMCP Study Area

Hollenbeck Park

COVINA

Edna Park

Heritage Plaza Park

Covina Park

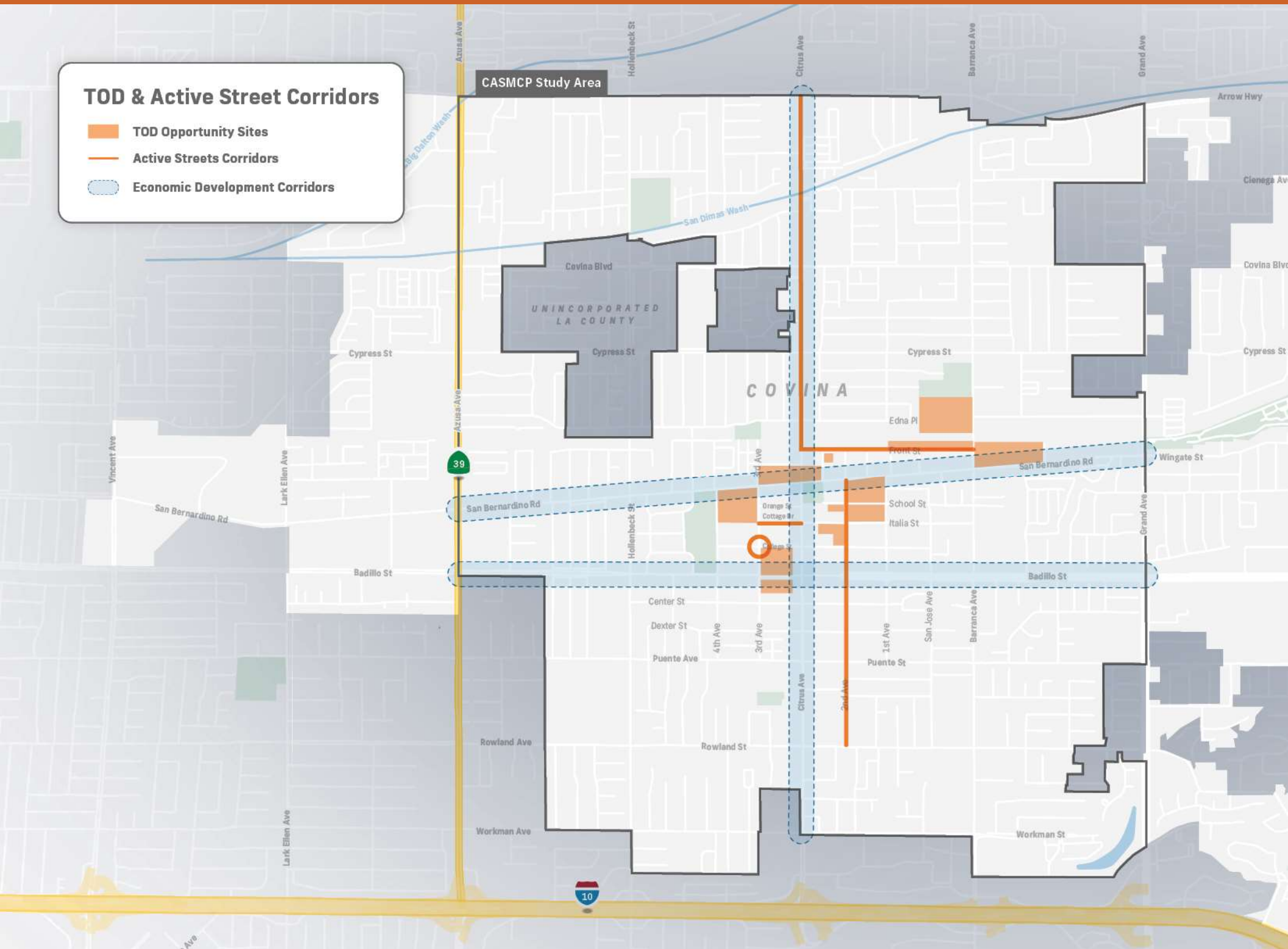
Casper Park

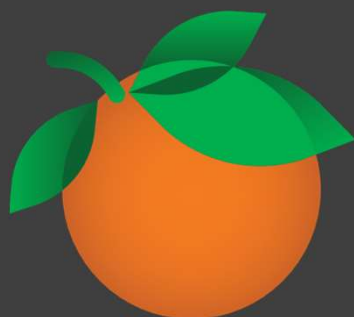
Kelly Park

10

TOD & Active Street Corridors

-  TOD Opportunity Sites
-  Active Streets Corridors
-  Economic Development Corridors



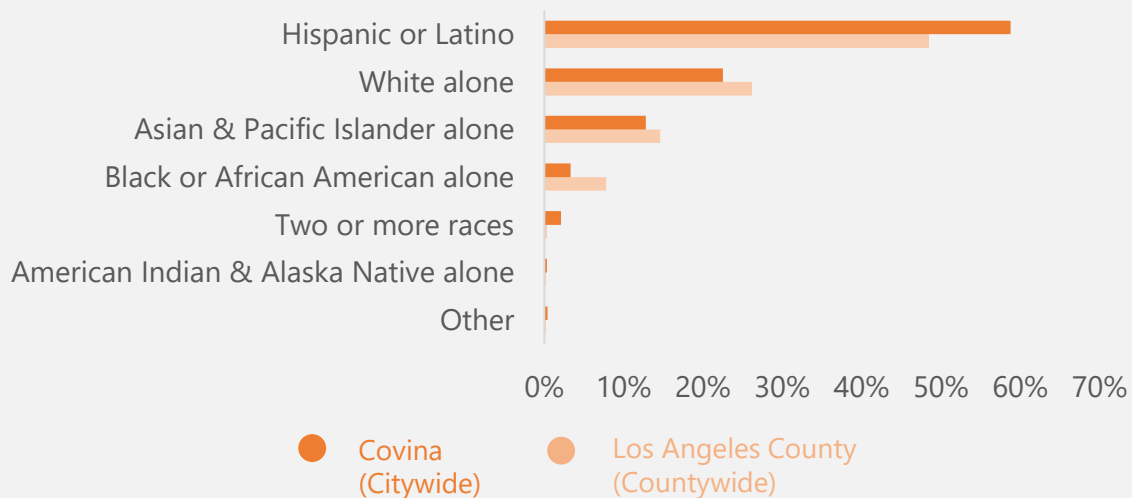


Existing Conditions

Equity Study

- Demographics
- Socioeconomics
- CalEnviroScreen
- Disadvantaged Communities
- Sensitive Communities
- Healthy Places Index
- Park Access
- Grocery Store Access
- Housing and Transportation Affordability Index

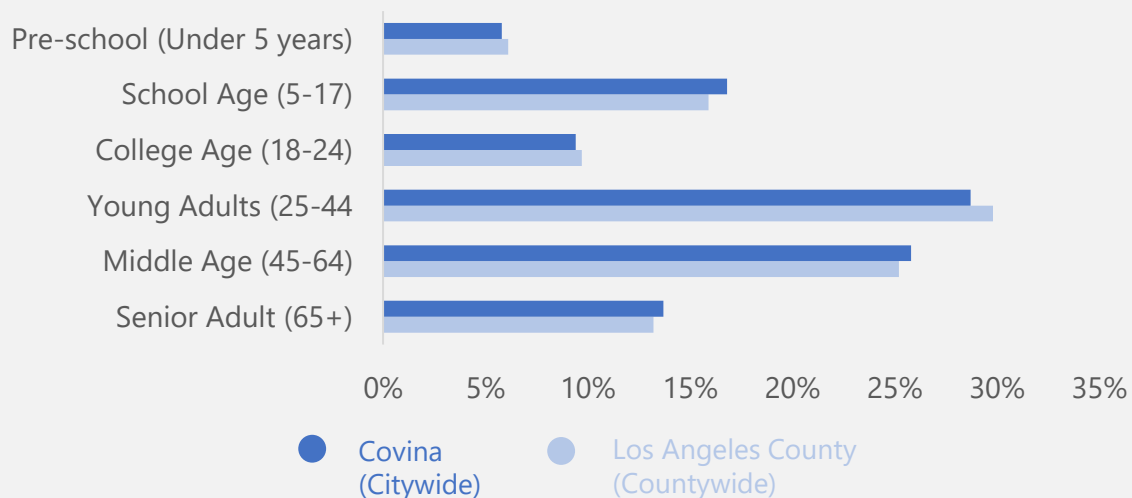
Race & Ethnicity



In both Covina and the Los Angeles County, Hispanic or Latino residents make up the largest ethnic group.

Covina has approximately 20 percent more Hispanic or Latino residents than the County.

Age



Covina has a similar age composition as the County. The median age for Covina is 37.3 years old and 36.5 years old for the County.

Source: American Community Survey 2015-2019 5-Year Estimates

Predominant Population

CENSUS TRACTS WITH A HISPANIC MAJORITY

- Predominant (gap > 50%)
- Sizeable (gap 10% - 50%)
- Slim (gap < 10%)
- Census Tracts

CASMCP Study Area

STUDY AREA STATS

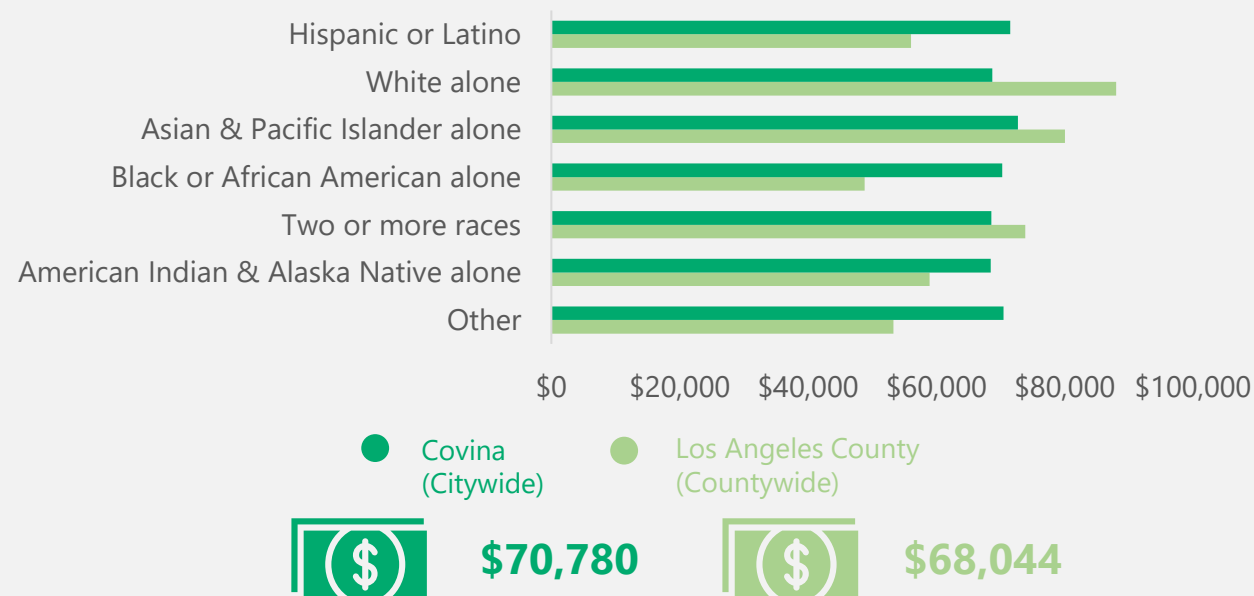
Hispanic or Latino residents are a predominant population in the City. Within the study area, most Census tracts contain a ***Sizeable*** Hispanic majority. One Census tract contains a ***Slim*** Hispanic majority.

The map indicates the extent to which one group is dominant over the next most populous.

- Predominant means the group contains 50% or more people than the next most populous.
- Sizeable means the group contains 10-20% more people than the next most populous.
- Slim means the group contains 10 percent or less people than the next most populous.

Source: California Department of Housing and Community Development, AFFH Data Viewer; US Census Bureau SFI and TIGER data sets 2010

Median Income



The median income is 4 percent higher in Covina than in the County. In the City, there are no significant disparities between groups, unlike in the County where most people of color have significantly lower incomes than White residents.

Drive Alone

78%



Covina
(Citywide)

74%



Los Angeles
County
(Countywide)

No Vehicle Available

2.5%



Covina
(Citywide)

3.9%



Los Angeles
County
(Countywide)

Covina has a similar commuting and vehicle accessibility trends as the County. Roughly $\frac{3}{4}$ of residents in both the County and City drive alone to work. The County has a slightly higher proportion of households without a vehicle.

Source: American Community Survey 2015-2019 5-Year Estimates

Median Income

BY CENSUS BLOCK GROUP

- \$0 - \$35,000
- \$35,000 - \$55,000
- \$55,000 - \$70,780 (Covina Median Income)
- \$70,780 - \$95,000
- Greater than \$95,000
- Census Block Group

CASMCP Study Area

STUDY AREA STATS

A majority of block groups in the study area fall within or above the City's median income. Lower-income block groups are mostly located east of Citrus Avenue.

Note: Median Income shown at Block Group geography level.

Source: California Department of Housing and Community Development, AFFH Data Viewer; ACS 2015-2019 5-year estimates

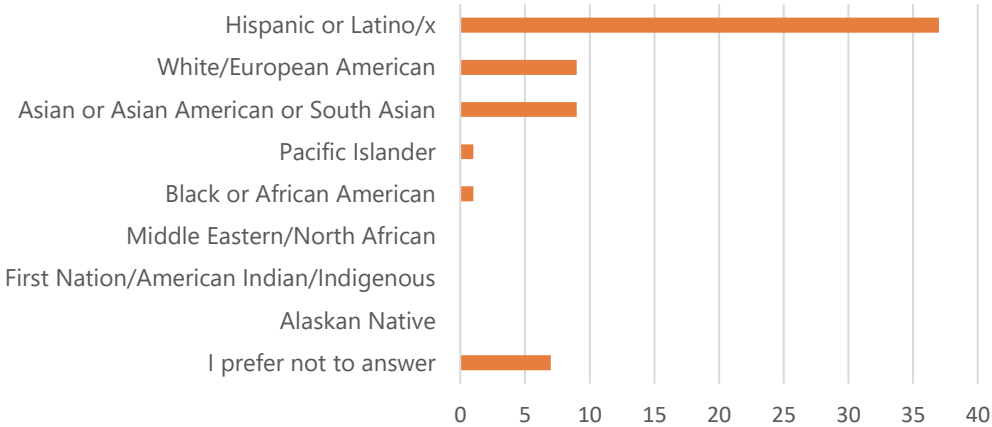
An online survey has been used to hear more from residents about how they travel and move about the downtown Covina area. The survey is meant to inform the public about the project, but to also get an initial understanding of existing conditions from residents themselves. The following provides a brief summary of the information gathered so far.

Based on 58 completed online surveys:

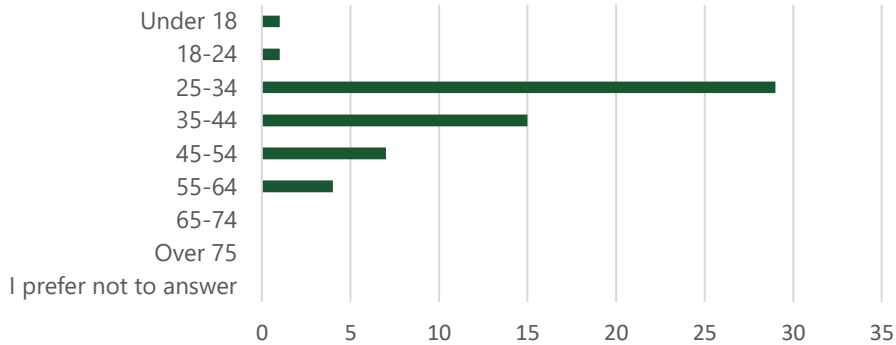
- » Race and ethnicity of survey respondents are a similar proportion to citywide demographics.
- » The age composition of survey respondents is similar to that of the city but missing the over 65 age groups.
- » A majority of survey respondents are women.

Given the total number of survey responses, the survey may not accurately reflect the city’s population and demographics because of the small sample size. However, these responses do provide some insight into emerging trends. See pages 36 and 37 for more details on the survey methodology.

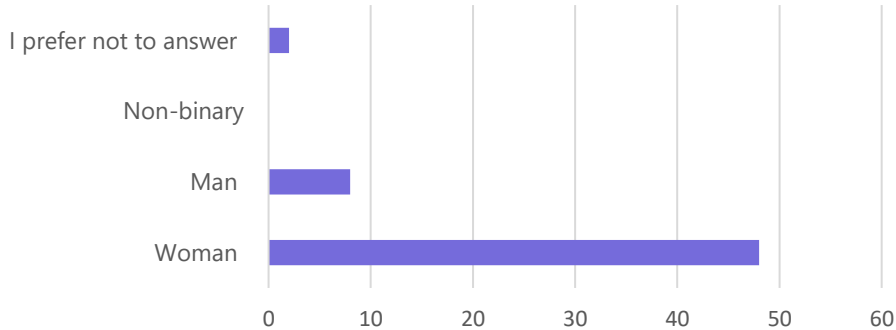
Race and Ethnicity



Age



Gender



Access to vehicles among survey respondents is similar to citywide demographic information.

Given the total number of survey responses, the survey may not accurately reflect the city's population and demographics because of the small sample size

Census Demographic Data

Drive Alone

78%



Covina
(Citywide)

74%



Los Angeles
County
(Countywide)

No Vehicle Available

2.5%



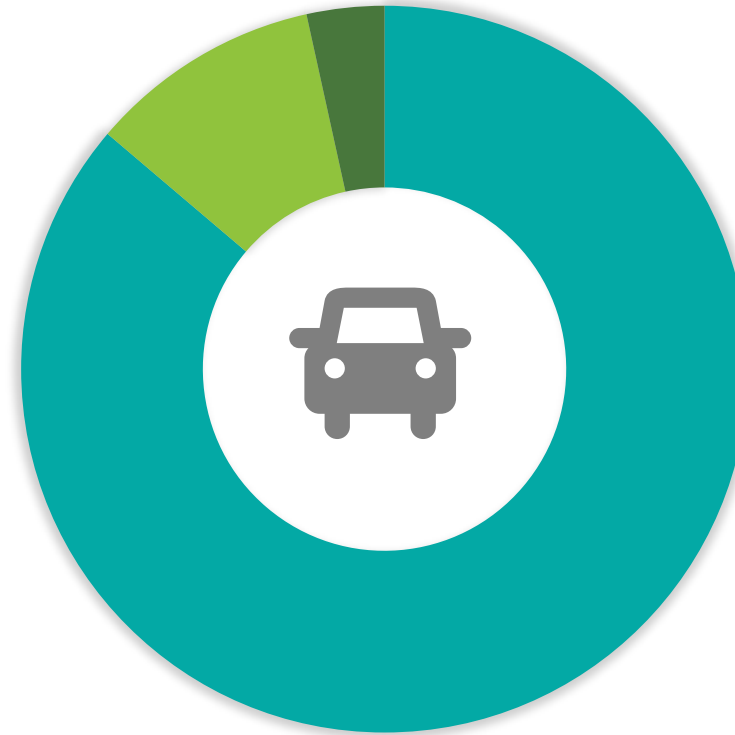
Covina

3.9%



Los Angeles
County

Do you have access to a personal vehicle?
86% said *yes* versus only **3.5%** that said *no*

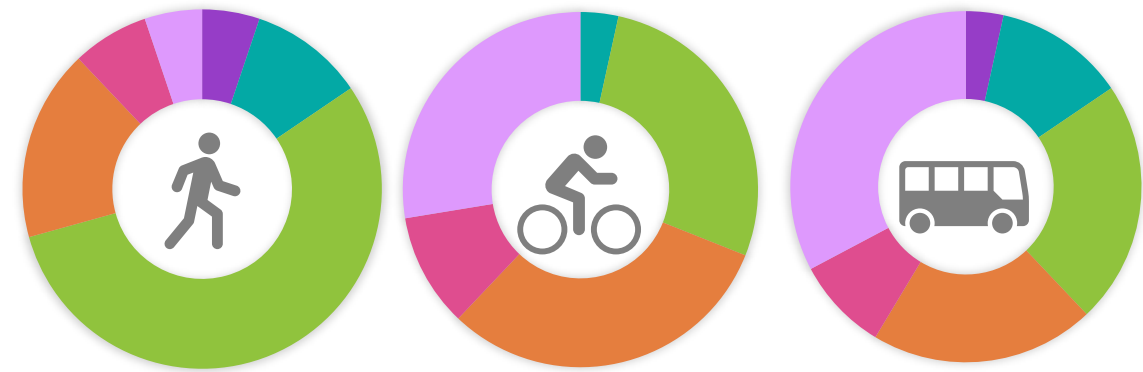


- I own a personal vehicle
- My household has access to a personal vehicle
- No, I do not have access to a personal vehicle

Respondents were asked to describe their tendency to use alternative means of transportation, specifically for walking, biking, and taking transit. For each of these three modes they were asked how often they used that mode for their trips. They were also asked to indicate top concerns that kept them from using any of these modes.

Responses show:

- » People are more likely to walk than bike or take transit.
- » The interested but concerned cohort is consistent in size for walking, biking, and transit.
- » Not interested cohort is larger for bicycling and taking transit compared to walking.
- » Inaccessibility is an issue for all three modes, but larger for bicycles and transit.



Top Concerns:

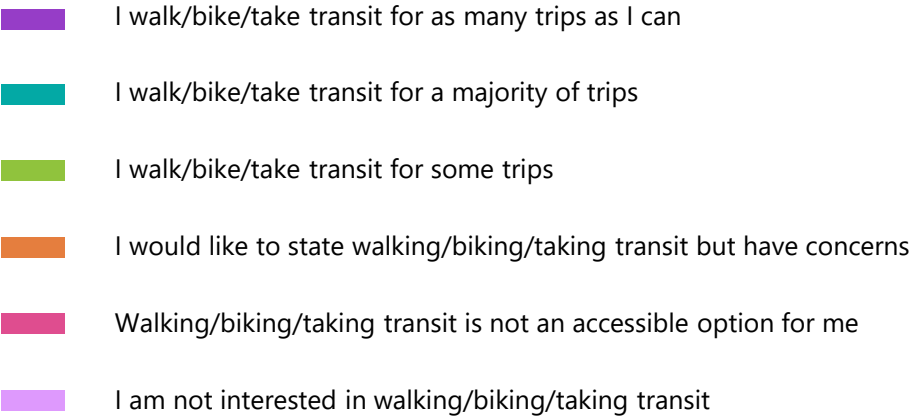
- » Safety
- » Inadequate crosswalks
- » Comfort/lack of shade

Top Concerns:

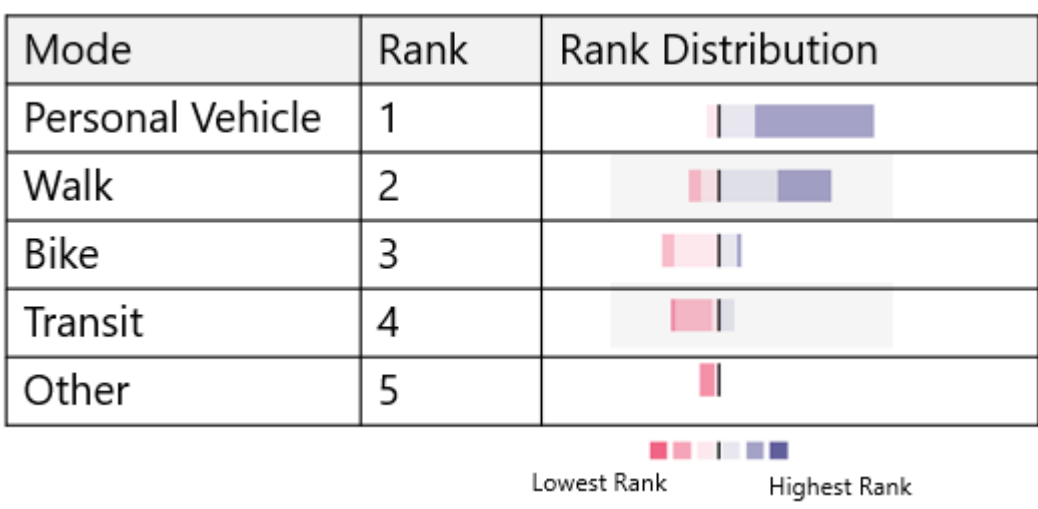
- » Safety
- » Security/ bike friendly infrastructure

Top Concerns:

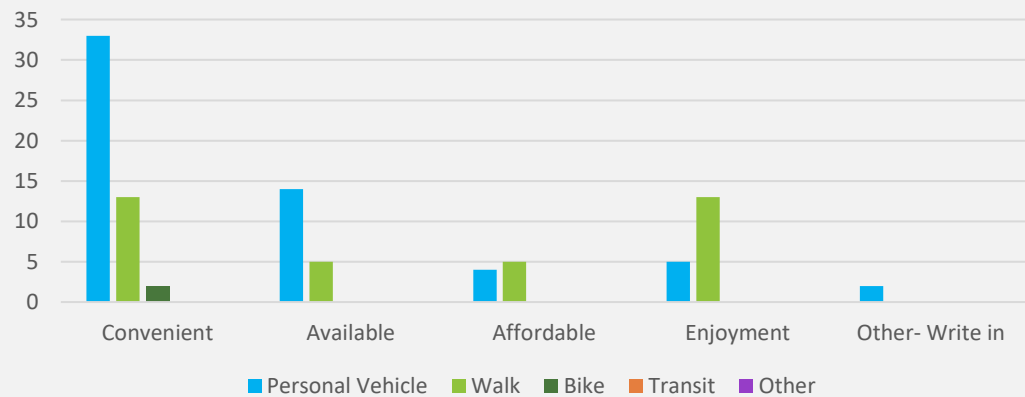
- » Safety
- » Reliability/convenience



Rank the modes of transportation you use most often to get downtown



Why did you rank your first choice first?



Survey Respondents:

Personal vehicle is the most popular mode used to get to Downtown. This correlates with the citywide household access to vehicles.

Walking is the second most popular way for people to get to Downtown. This follows a higher preference of people to walk places as compared to bicycle and transit generally.

Choosing to use a personal automobile is used most often because of its convenience and availability.

People who choose to walk do so more for enjoyment and convenience, just above what is affordable and available to them.

Note: Other-write in was safety.

Identifying Community Inequities

This study used three publicly available tools to identify inequities within the study area. Each of these tools examine a variety of factors relating to the social, health, and environmental conditions of communities statewide. While two of these indices evaluate similar indicators, each one has a different focus.

CalEnviroScreen 4.0 identifies communities most affected by pollution and the population characteristics that make them especially vulnerable to pollution effects. It uses two groups of indicators to produce an overall composite score; pollution burdens and population characteristics.

Produced by the California Office of Environmental Health Hazard Assessment.

Healthy Places Index 3.0 quantifies factors that shape health to compare the health and well-being of communities and identify where health inequities exist. It combines 23 community characteristics into a single indexed score.

Produced by the California Public Health Alliance.

Sensitive Communities identifies communities vulnerable to displacement by analyzing criteria that would make it difficult for a household to afford drastic shifts in housing costs in the event of increased development.

Produced by the UC Berkley's Urban Displacement Project.

For the purposes of this study, both the similarities and variations in the three indices help identify potentially differing opportunities, challenges, and priorities within different neighborhoods in the study area. For example, one neighborhood might be more concerned about housing issues versus transportation-related burdens.

Comparison of Indicators

CalEnviroScreen 4.0 Pollution Burden

- » Ozone
- » PM 2.5
- » Children's Lead Risk from Housing
- » Diesel Particulate Matter
- » Drinking Water Contaminant
- » Pesticide Use
- » Toxic Release from Facilities
- » Traffic Impacts
- » Cleanup Sites
- » Groundwater Threats
- » Hazardous Waste Generators & Facilities
- » Impaired Water Bodies
- » Solid Waste and Facilities

Population Characteristics

- » Asthma
- » Cardiovascular Disease
- » Low Birth Weight Infants
- » Educational Attainment
- » Housing Burden
- » Linguistic Isolation
- » Poverty
- » Unemployment

Healthy Places Index 3.0

- » Population above Poverty
- » Population that is Employed
- » Per Capita Income
- » Pre-School Enrollment
- » High School Enrollment
- » Bachelor's Degree Attainment
- » 2020 Census Response Rate
- » Registered Voters
- » Automobile Access
- » Active Commuting
- » Park Access
- » Retail Density
- » Tree Canopy
- » Homeownership
- » Housing Habitability
- » Low-Income Homeowner Severe Housing Cost Burden
- » Low-Income Renter Severe Housing Cost Burden
- » Uncrowded Housing
- » Diesel PM
- » Drinking Water
- » Ozone
- » PM 2.5
- » Insured Adults

Sensitive Communities

- » Share of very low income residents is above 20%
- AND
- » Share of renters is above 40%
 - » Share of people of color is above 50%
 - » Share of very-low income households that are severely rent burdened above county median
- » Tracts or areas in close proximity have been experiencing displacement pressures.
- Displacement pressure is defined as:
- » Percent change in rent above county median for rent increases, 2012-2017
- OR
- » Difference between tract median rent and median rent for surrounding tracts above median for all tracts in county (rent gap), 2017

Sensitive Communities (Urban Displacement Project)

BY CENSUS TRACT

-  Vulnerable to Displacement
-  Disadvantaged Community

CASMCP Study Area

STUDY AREA STATS

2 Census tracts contain Sensitive Communities

A sensitive Community is defined as having a large proportion of very low-income residents, renters, people of color, and rent increases above the county median.

Source: California Department of Housing and Community Development, AFFH Data Viewer; UC Berkeley Urban Displacement Project (UDP)

Note: The UDP uses ACS 2012-2017 5-Year Estimates data.

CalEnviroScreen 4.0 Composite Score

BY CENSUS TRACT

- 24% or Lower
- 25% - 49%
- 50% - 74%
- 75% or Higher (DAC)
- Census Tracts

STUDY AREA STATS

1 Census tract qualifies as a Disadvantaged Community (DAC)

Disadvantaged Communities are defined as those disproportionately affected by a combination of economic, health, and environmental burdens. These communities have a CalEnviroScreen score in the 75th percentile or higher.

Source: California Department of Housing and Community Development, AFFH Data Viewer; CalEnviroScreen 4.0

CASMCP Study Area

4058

4059

4038.01

4037.21

4060

4061.01

4037.22

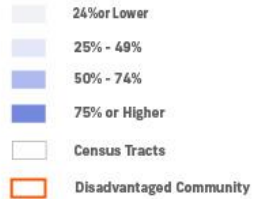
4061.02

4036

4062

CalEnviroScreen 4.0 Pollution Burden Score

BY CENSUS TRACT



Pollution Burdens

CalEnviroScreen pollution burden score uses various pollution indicators to represent potential exposures to pollutants and adverse environmental conditions caused by pollution.

CASMCP Study Area

4058

4059

4038.01

4037.21

4060

4061.01

4037.22

4061.02

4036

4062

STUDY AREA STATS

PM 2.5 and Ozone are the highest-ranking pollution burdens throughout the study area.

A majority of the top pollution burdens within the study area and the disadvantaged community relates to transportation.

DISADVANTAGED COMMUNITY STATS

86th percentile traffic impacts

Traffic impacts is a measure of the number of vehicles on the roads in an area.

85th percentile PM 2.5

Particulate Matter, or PM 2.5, is an air pollutant that contains a mixture of organic chemicals, dust, soot, and metals. These particles usually come from cars, trucks, factories and other activities.

77th percentile ozone

Ozone is found in smog and at ground level it is formed when pollutants chemically react in the presence of sunlight. Cars, factories, farms, are some main sources of ozone pollution.

CalEnviroScreen 4.0 Population Characteristics Score

BY CENSUS TRACT

- 24% or Lower
- 25% - 49%
- 50% - 74%
- 75% or Higher
- Census Tracts
- Disadvantaged Community

Population Characteristics
CalEnviroScreen's population characteristics score uses both health and socioeconomic indicators that can contribute to a community's vulnerability to pollution.

CASMCP Study Area

4058

4059

4038.01

4037.21

4060

4061.01

4037.22

4061.02

4036

4062

STUDY AREA STATS

A majority of Census tracts have a population score within the 50th to 65th percentile range, including the disadvantaged community.

Within the disadvantaged community, there are only two indicators that scored in the 75th percentile or higher ranking.

DISADVANTAGED COMMUNITY STATS

96th percentile housing burden

Housing burdened low income households are households that are both low income and highly burdened by housing costs. Severe cost burden is defined as paying more than 50 percent of income on housing.

85th percentile linguistic isolation

Linguistic isolation is a term used by the US Census Bureau to describe limited English-speaking households. Members in these households speak a language other than English and speak English less than "very well."

Census Tracts	Percentiles and Indicators		
	CES 4.0 Percentile	Pollution Indicators Percentile	Population Characteristics Percentile
Census Tracts in Study Area			
4036	49	79	30
4037.21	54	63	44
4037.22	64	75	51
4038.01	49	40	51
4058	62	82	44
4059	51	36	56
4060	51	47	50
4061.01	59	62	51
4061.02	65	63	59
4062	77	81	66

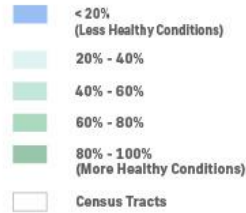
Census Tracts	Percentiles and Indicators									
	Pollution Score	Cleanup Sites	Grndwater Threats	Toxic Release Inventory	PM2.5	Traffic	Diesel PM	Drinking Water	Ozone	Lead
Study Area										
4036	79	0	0	77	87	91	51	96	77	72
4037.21	63	9	28	76	80	34	32	91	79	64
4037.22	75	0	23	76	86	41	31	92	78	85
4038.01	40	0	4	75	87	30	45	77	80	53
4058	82	71	25	77	72	47	72	30	80	81
4059	36	2	2	75	75	38	33	42	80	85
4060	47	9	5	77	75	39	37	79	79	79
4061.01	62	19	17	77	80	31	54	50	78	80
4061.02	63	5	5	77	85	31	78	50	77	82
4062	81	0	0	78	85	86	75	93	77	76

The study will not be able to address pollution burdens outside the realm of transportation because the study focus is to create better conditions for alternative means of transportation. Although these areas experience a number of burdens, addressing the ones related to transportation – i.e., improving walking, biking, and transit conditions could relieve pollution burdens related to transportation (e.g. PM 2.5, diesel PM, traffic, and ozone) by encouraging residents to drive less - will contribute to addressing burdens overall.

Census Tracts	Percentiles and Indicators								
	Population Score	Asthma	Low Birth Weight	Cardio Disease	Edu. Attainmt.	Linguistic Isolation	Poverty	Unemploy.	Housing Burden
Study Area									
4036	30	29	68	15	58	56	30	6	28
4037.21	44	48	42	37	45	29	38	72	59
4037.22	51	61	31	49	57	47	60	50	56
4038.01	51	52	43	53	40	50	50	81	39
4058	44	51	41	48	66	58	36	49	15
4059	56	59	18	61	74	51	74	87	26
4060	50	46	62	37	53	55	37	63	47
4061.01	51	72	39	49	48	47	35	43	65
4061.02	59	81	48	62	45	27	57	51	58
4062	66	36	72	23	73	85	70	58	96

Healthy Places Index

BY CENSUS TRACT



CASMCP Study Area

STUDY AREA STATS

49th percentile HPI composite score

Two of the lowest ranking categories within the study area relate to housing and transportation. The low scores within the study area are largely driven by the low scores in the disadvantaged community.

4th percentile transportation category

- » % of households with access to an auto
- » % of workers commuting by alternative modes

10th percentile housing category

- » % of occupied housing units by property owners
- » % households with complete kitchen and plumbing
- » % of low income homeowners paying more than 50% of income on housing
- » % of low income renter households paying more than 50% of income on housing
- » % of households with less or equal to 1 occupant per room

Source: Public Health Alliance of Southern California, California Healthy Places Index 3.0

Healthy Places Index Indicators and Community Characteristics	Covina	Study Area	4036	4037.21	4037.22	4038.01	4058	4059	4060	4061.01	4061.02	4062
Economic	63.3	7.9	56.7	66.3	37.3	43.6	55.6	28.9	55.4	77.5	50.2	41.2
Above Poverty	58.3	44.8	54.9	55.1	28.3	42.7	61.1	19.9	59.1	62.5	39.2	30.7
Employed	80.1	36.4	70.2	93.7	62.1	50.1	70.8	48.5	69.6	98.8	80.0	66.8
Per Capita Income	48.2	39.4	47.2	43.8	29.8	42.4	32.7	28.5	36.5	48.9	36.6	37.0
Education	60.0	13.8	81.3	69.7	40.8	57.0	54.1	61.4	60.0	56.6	48.8	4.9
Pre-School Enrollment	55.9	55.3	52.1	33.1	28.4	47.1	27.5	34.2	47.3	46.1	39.1	29.1
High School Enrollment	35.2	23.9	63.0	63.0	24.5	63.0	63.0	25.5	9.2	63.0	63.0	8.7
Bachelor’s Degree Attainment	23.9	38.1	95.1	87.6	49.7	56.9	68.4	77.8	95.1	57.3	48.8	12.1
Social	52.1	7.2	58.3	47.1	29.1	44.2	49.1	50.7	52.5	39.0	34.0	35.3
2020 Census Response Rate	63.5	48.7	54.1	50.3	25.8	48.1	64.5	57.3	54.1	35.3	N/A	40.1
Voting	28.7	12.4	57.5	41.6	32.6	38.9	35.0	41.4	46.7	41.3	32.8	31.5
Transportation	52.5	3.9	86.7	19.4	82.4	75.5	86.7	47.7	84.1	38.1	10.0	4.3
Automobile Access	36.4	50.6	88.8	28.9	65.5	75.7	93.3	49.3	60.2	36.6	19.8	7.4
Active Commuting	74.8	50.2	62.5	48.1	68.2	53.7	59.7	52.3	72.6	60.7	44.5	71.3

- » Lower percentile scores indicate less healthy conditions.
- » The Study Area percentile scores represent the combined score of all the Census tracts in the study area.
- » Percentile ranking is based on comparisons relative to that geography. For example, Study Area compares to other state Census tracts, Covina to other state cities, and Los Angeles County to other state Counties.

Healthy Places Index Indicators and Community Characteristics	Covina	Study Area	4036	4037.21	4037.22	4038.01	4058	4059	4060	4061.01	4061.02	4062
Neighborhood	39.2	17.9	26.4	57.0	34.7	18.8	25.9	32.3	35.4	56.7	41.1	13.3
Park Access	57.7	32.8	20.4	80.1	38.8	22.3	29.5	47.4	37.4	80.1	36.0	13.4
Retail Density	91.2	37.2	81.7	77.5	82.5	78.7	81.6	35.5	79.7	71.4	91.6	89.1
Tree Canopy	21.6	42.7	76.1	16.4	18.2	12.4	20.3	15.2	40.8	27.5	17.5	13.2
Housing	32.1	9.6	76.9	44.6	28.3	47.0	68.0	61.5	50.6	50.0	23.7	11.2
Homeownership	27.9	49.6	73.7	48.2	28.3	57.9	56.0	63.7	63.0	28.0	8.8	26.5
Housing Habitability	37.7	41.4	56.9	49.4	12.1	23.9	80.9	80.9	38.5	42.5	19.6	26.9
Low-Income Homeowner Severe Housing Cost Burden	47.8	60.3	28.9	41.1	85.6	85.8	89.5	49.3	33.0	46.5	17.0	9.9
Low-Income Renter Severe Housing Cost Burden	56.0	57.8	91.9	15.3	60.3	17.1	64.0	53.3	38.9	56.9	83.0	4.0
Uncrowded Housing	28.9	47.2	41.2	72.2	12.3	42.6	24.6	35.0	47.0	65.1	28.2	33.8
Clean Environment	16.0	11.4	9.7	14.7	27.8	16.7	31.2	37.1	28.4	28.9	24.3	11.8
Diesel PM	21.9	48.8	49.1	68.3	69.3	55.3	27.8	67.4	63.6	45.8	21.8	24.5
Drinking Water	29.8	72.0	1.6	3.4	31.9	13.2	62.3	62.3	33.7	37.8	37.8	7.4
Ozone	19.4	72.9	23.8	22.3	22.3	20.7	18.6	20.7	20.7	22.3	23.8	23.8
PM 2.5	12.9	57.5	12.6	20.3	14.3	13.5	28.7	25.8	24.8	19.7	14.7	15.4
Healthcare Access	47.6	10.0	45.4	38.7	37.8	61.3	41.6	34.6	51.3	70.6	33.4	35.3
Insured Adults	43.9	16.9	45.4	38.7	37.8	61.3	41.6	34.6	51.3	70.6	33.4	35.3

- » Lower percentile scores indicate less healthy conditions.
- » The Study Area percentile scores represent the combined score of all the Census tracts in the study area.
- » Percentile ranking is based on comparisons relative to that geography. For example, Study Area compares to other state Census tracts, Covina to other state cities, and Los Angeles County to other state Counties.

Healthy Places Index

BY CENSUS TRACT



CASMCP Study Area

4058

4059

4038.01

4037.21

4060

4061.01

4037.22

4061.02

4036

4062

STUDY AREA STATS

The two identified sensitive communities have differing conditions.

Census tract 4037.21 is the healthiest tract in the study area despite it qualifying as a sensitive community. Census tract 4062 is one of the least healthy tracts in the study area, indicating it bears a variety of burdens in addition to pollution.

CENSUS TRACT 4037.21

57th percentile HPI composite score

This tract scores the lowest in clean environment and transportation but scores well in the economic, education, and neighborhood categories likely due to access to parks and commercial uses on Citrus Avenue.

CENSUS TRACT 4062

22nd percentile HPI composite score

This tract scores poorly in several categories, with many ranking in the 15th percentile. Some of the lowest ranking categories relate to housing, transportation, and neighborhood conditions.

Parkland

Study Area Parks

CASMCP Study Area

Hollenbeck Park

Edna Park

Heritage Plaza

Covina Park

Cougar Park

Kelby Park

STUDY AREA STATS

6 City-owned parks

30 Acres of parkland

5 acre average park size

Amenities include:

2 pools

1 soccer field

1 splash pad

3 basketball courts

7 playgrounds

3 community centers

6 multi-purpose fields

Park Access

Parks and Open Space

No Park Access*

< 200 people per sq mi

200 - 1,000 people per sq mi

>1,000 people per sq mi

*Over 1/2 mile from park or open space

Sensitive Communities

Disadvantaged Community

CASMCP Study Area

Hollenbeck Park

Kelby Park

Edna Park

Heritage Plaza

Covina Park

Cougar Park

STUDY AREA STATS

25%

of study area residents live farther than 1/2 mile from a park

Generally, the study area has a good amount of larger park space, with an average park size of five acres. However, it still lacks smaller neighborhood-style parks or parklets that are less than one acre in size. These smaller parks can increase park access where it is currently lacking.

Source: California Department of Parks and Recreation, Park Access Tool.

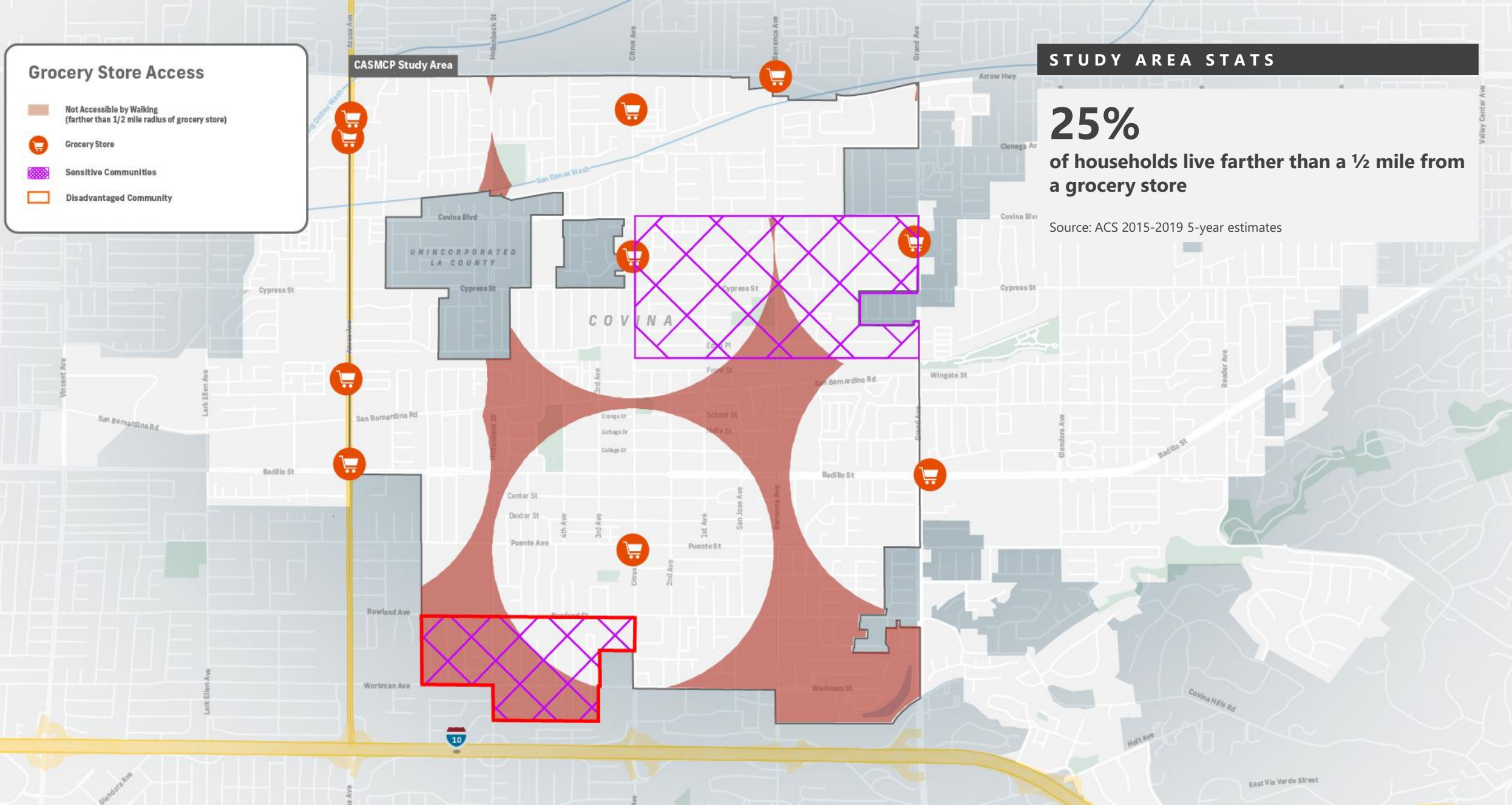
Grocery Store Access

- Not Accessible by Walking
(farther than 1/2 mile radius of grocery store)
- Grocery Store
- Sensitive Communities
- Disadvantaged Community

STUDY AREA STATS

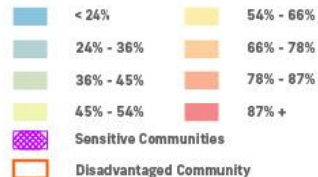
25%
of households live farther than a ½ mile from
a grocery store

Source: ACS 2015-2019 5-year estimates



Housing & Transportation Affordability Index

BY CENSUS TRACT
Housing & Transportation Costs as a % of Income



CASMCP Study Area

Key Take-a-Way

Study area is performing similar to the City of Covina and LA County. The Study Area is performing better than California.

STUDY AREA STATS

58%

Average percent of household income dedicated to housing and transportation

vs. 59% in Covina; 57% in Los Angeles County; **84% in California**

Source: Center for Neighborhood Technology, Housing and Transportation Affordability Index

35%

Average percent of household income dedicated to *housing* (e.g., rent, mortgage)

vs. 35% in Covina; 35% in Los Angeles County; **43% in California**

Additionally, city level data show that 41% of all city households are cost-burdened, meaning they spend 30% or more of their income on housing costs. Source: U.S. Department of Housing and Urban Development Comprehensive Housing Affordability Strategy (CHAS) Tables 2015-2019

24%

Average percent of household income dedicated to *transportation* (e.g. auto payment, fuel, transit costs)

vs. 24% in Covina; 22% in Los Angeles County; **41% California**

Pedestrian Collisions

BY SEVERITY, 2011-2020

- Fatal
- Severe Injury
- Other Visible Injury
- Complaint of Pain
- Sensitive Communities
- Disadvantaged Community

CASMCP Study Area

DAC & SENSITIVE COMMUNITY STATS

18 total pedestrian collisions

vs. 122 total pedestrian collisions in whole study area

DAC and Sensitive Areas = 24% of population

DAC and Sensitive Areas = 14% of collisions

Collisions are concentrated along major corridors (Badillo, San Bernadino, Arrow Hwy, and Citrus) rather than within disadvantaged and sensitive communities.

Source: SWITRS/TIMS, 2011-2020

Bicycle Collisions

BY SEVERITY, 2011-2020

- Severe Injury
- Other Visible Injury
- Complaint of Pain
- Sensitive Communities
- Disadvantaged Community

DAC & SENSITIVE COMMUNITY STATS

14 total bicycle collisions

vs. 92 total pedestrian collisions in whole study area

DAC and Sensitive Areas = 24% of population

DAC and Sensitive Area = 15% of collisions

Collisions are concentrated along major corridors (Rowland, Badillo, Arrow Hwy, Azusa, Grand and Citrus) rather than within disadvantaged and sensitive communities.

Source: SWITRS/TIMS, 2011-2020

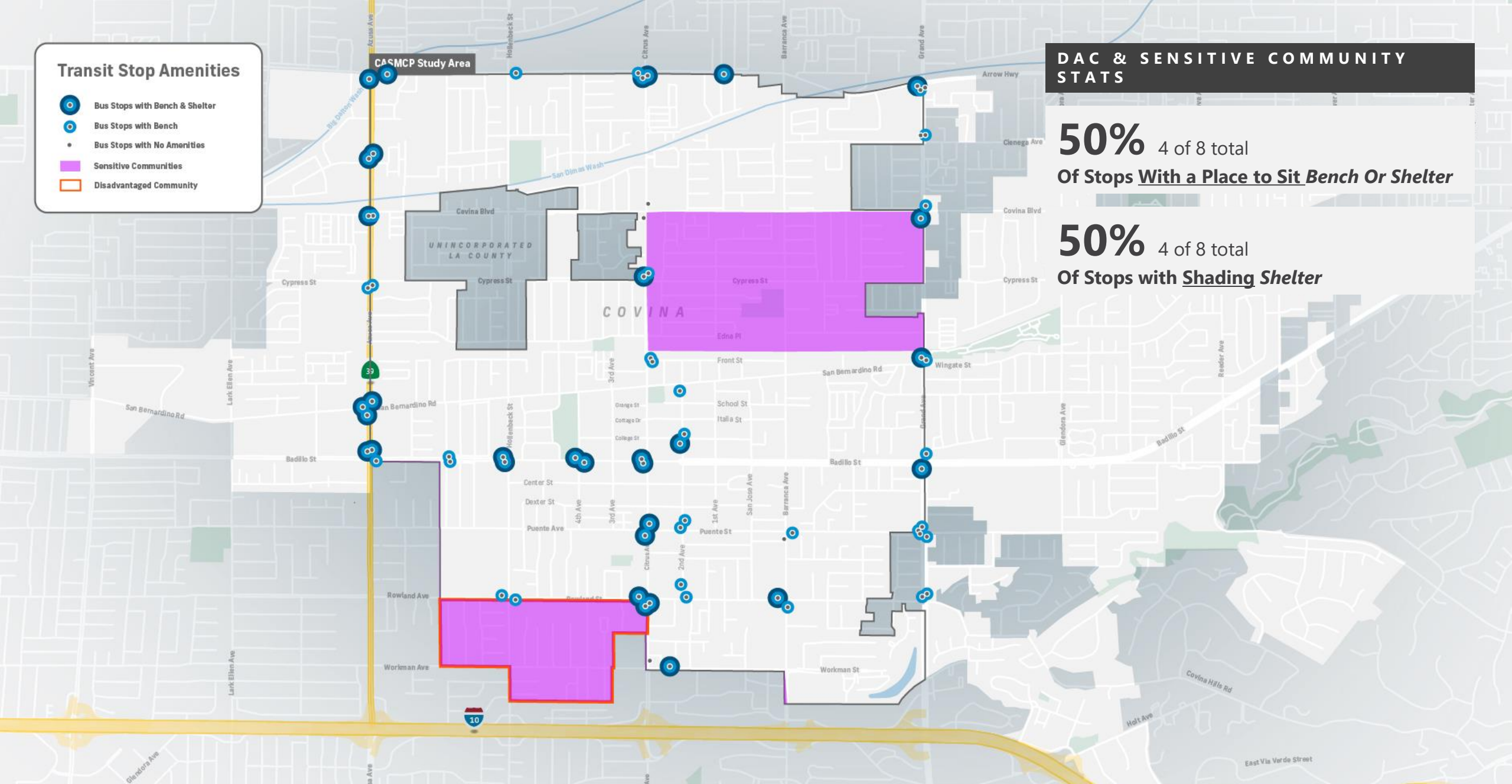
Transit Stop Amenities

-  Bus Stops with Bench & Shelter
-  Bus Stops with Bench
-  Bus Stops with No Amenities
-  Sensitive Communities
-  Disadvantaged Community

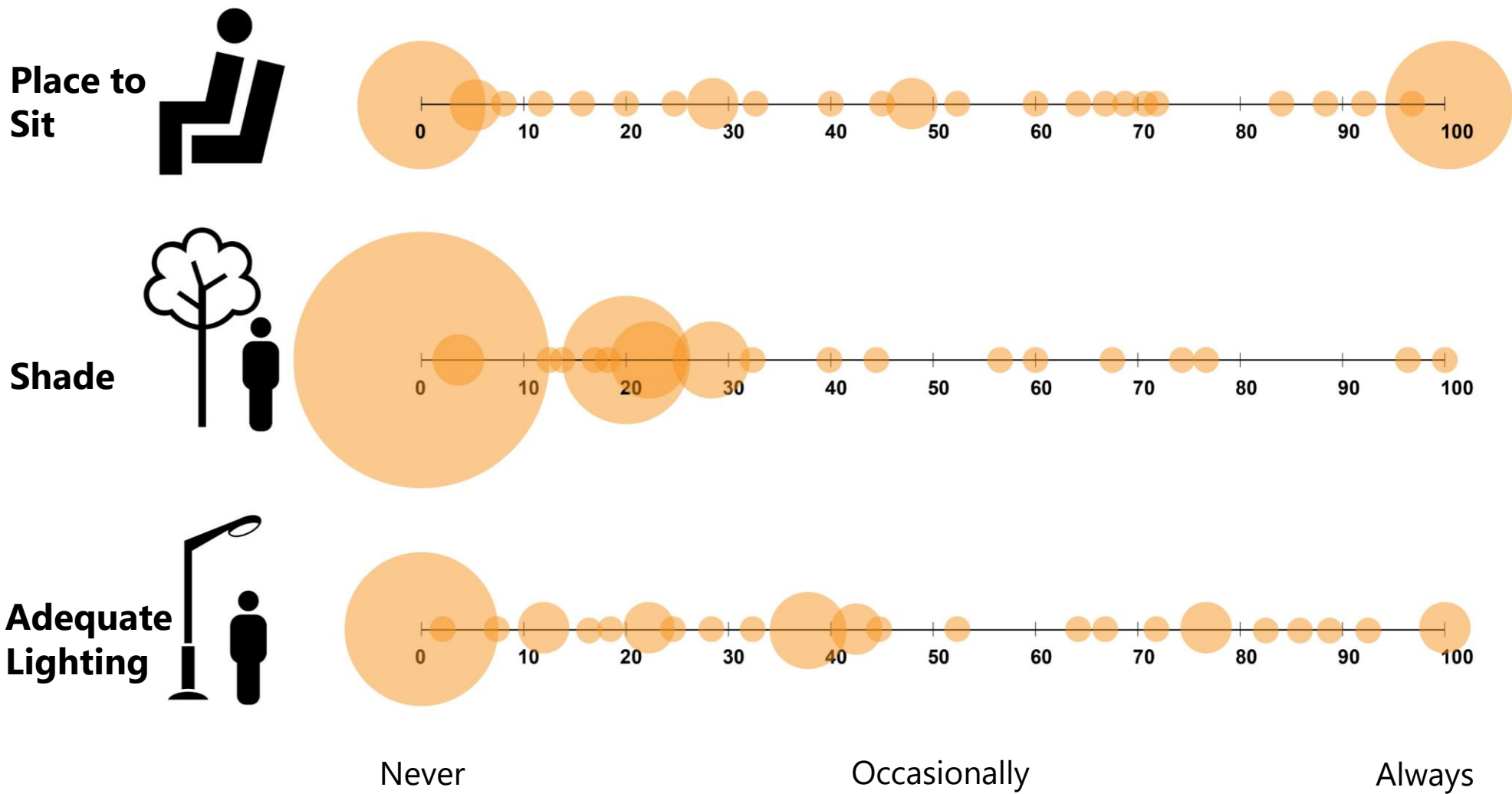
DAC & SENSITIVE COMMUNITY STATS

50% 4 of 8 total
Of Stops With a Place to Sit Bench Or Shelter

50% 4 of 8 total
Of Stops with Shading Shelter



When waiting for transit, how often do you have....?

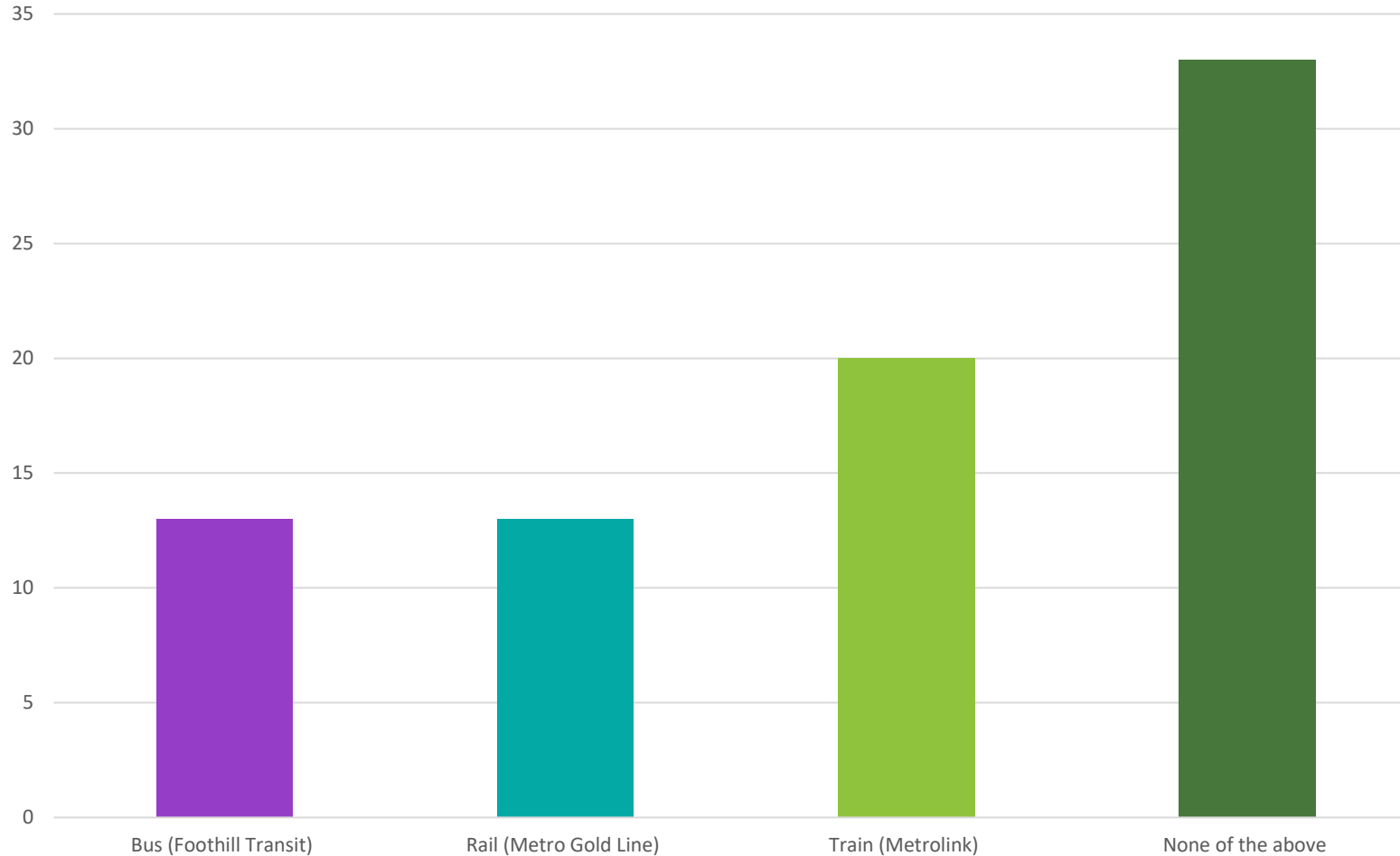


Concentrations of seating availability at never and always, with some fairly even distribution in the occasionally available category.

Most of survey respondents indicated there is not adequate shade at a majority of transit stops.

Adequate lighting is fairly evenly distributed from never to always.

What type of transit do you use to get around the City?



Metrolink is slightly preferred over buses and Metro Light Rail (Gold Line).

What are the other transit modes people use to get around the City?

1. Active transportation and urban design improvements should prioritize urban greening elements and environmental design.

- » Pollution conditions are the primary factors for communities and the study area qualifying as disadvantaged or sensitive communities according to several statewide indices.
- » Climate change will continue to exacerbate negative environmental conditions: rising temperatures, more prolonged and frequent heat waves, heat island effect, and droughts.

2. Active transportation improvements should consider potential to develop green “filters” along freight and highway corridors to improve air quality.

- » Major sources of pollution are related to transportation (Diesel PM, PM 2.5, Ozone) throughout the study area.
- » Consider regional and public-private coordination to create improvements to freight and highway network (e.g., fleet electrification, alternative routes, vegetative wall barriers, home filtration systems)

3. Active transportation should prioritize reductions of street space devoted to vehicles on major corridors.

- » Majority of pedestrian and bicycle collision occur along major corridors.
- » These spaces could provide placemaking opportunities to create a more pedestrian oriented environments (e.g., parklets, pedestrian refuge areas, shading)

Census tract 4062 is in close proximity to Interstate 10 and is intersected by major corridors such Rowland Avenue, Hollenbeck Street, and Citrus Avenue.



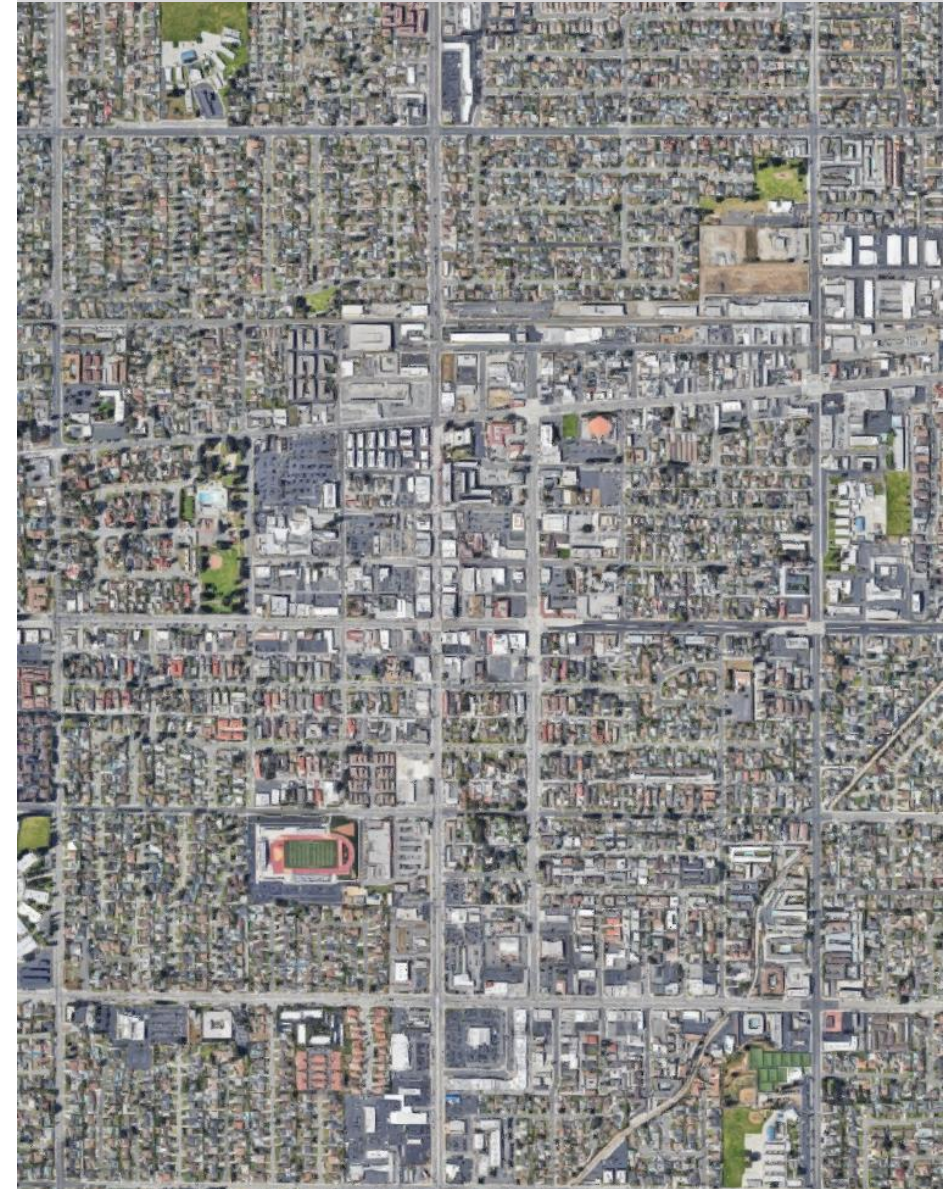
Study area lacks network of closer, smaller parks and open spaces. These spaces could be provided through shared-use agreements with local schools.

4. **Active transportation and urban design improvements should begin creating a network of small public spaces and parks.**

- » Study area has multiple large parks with variety of amenities – most of study area is within ¼ mile to these parks. Network of closer, smaller parks and open spaces are lacking.
- » Multiple examples of existing spaces that can be designed for small open spaces (e.g., frontage road medians). Summarized in Urban Design Study.
- » Consider shared-use agreements to allow public use of local school outdoor facilities after school hours.

5. **Active transportation and urban design improvements should be prioritized in the two identified sensitive and disadvantaged communities.**

- » These two communities bear the most burdens related to pollution and/or housing cost of all Census tracts in the study area.
- » Tract 4062 is the most impacted by several health, social, and environmental conditions. Tract 4037.21 has relatively healthy neighborhood conditions (park and retail access) but still suffers from housing and pollution-related issues.
- » Should also consider policy updates (e.g., targeted rent control) to prevent displacement of existing communities if public realm improvements make neighborhoods more desirable.



Online Survey Methodology

The online survey was shared with the community using:

- City Social Media Accounts;
- QR codes at pop-up events such as the Farmer's Market;
- QR codes on information kiosks located in Downtown;
- Paper copies available at public facilities and with community partners.

As of October 17, 2022, we've received a total of 58 responses to the survey.

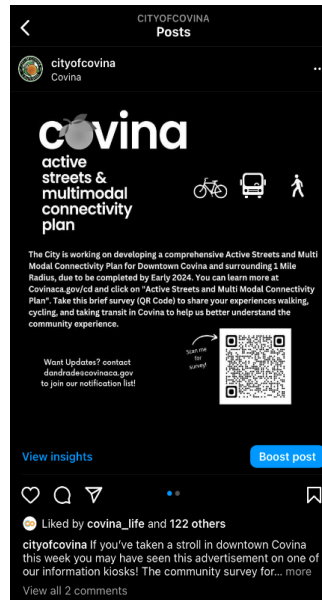
The 58 responses gathered are not representative of the entire community. The responses reflect the habits and thoughts of the community members who we have connected with through the methods listed above.

The number of responses for individual questions varies as a result of conditions and questions being optional. Conditions will only show a follow up question to respondents if a certain response was given. Optional questions allow respondents to only answer questions they feel comfortable responding to as well as limit survey fatigue by not requiring input.

Have you heard about the Active Streets & Multimodal Connectivity Plan?

Visit our tent on Friday, August 26th 5-9pm at Farmer's Market & Family Fun Night at Heritage Plaza Park to learn more!

Your input will help improve transit connections and safety for all modes of transportation in downtown Covina.



Online Survey Engagement

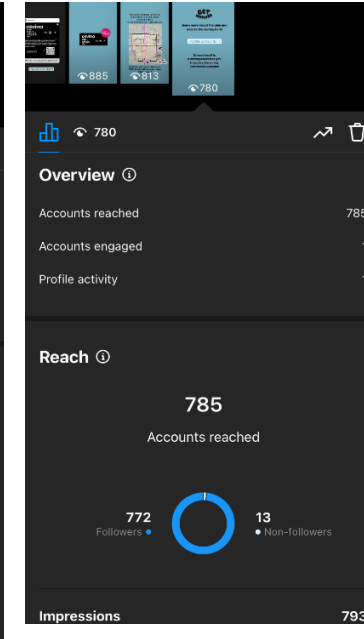
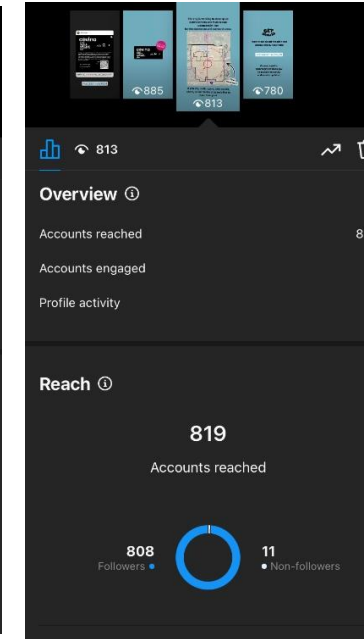
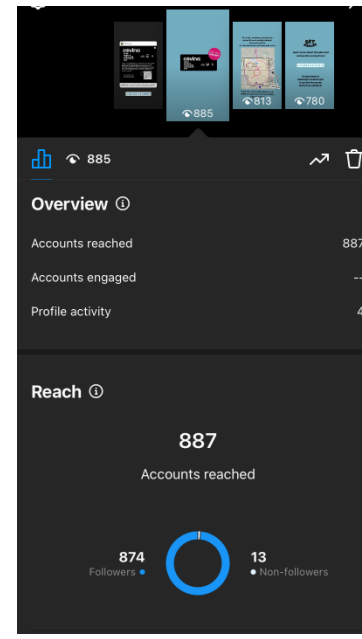
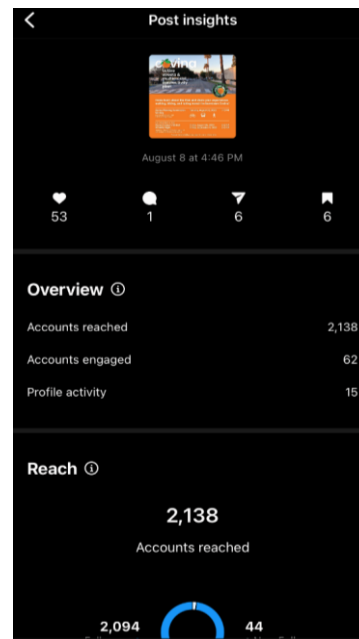
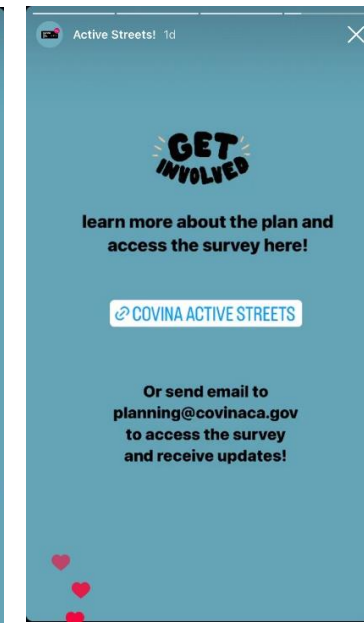
Social Media exposure data provides insight on the interest from the community regarding the Plan and the survey.

A total of 6 Posts were made on the City's Instagram account.

- Regular Post (3)
- 24-Hour "Story" (2)
- "Reel" (1)

Total Social Media Engagement:

- 9,332 views
- 238 clicks
- 26 shares



Appendix B - Urban Design Study

Existing Conditions

Urban Design Study

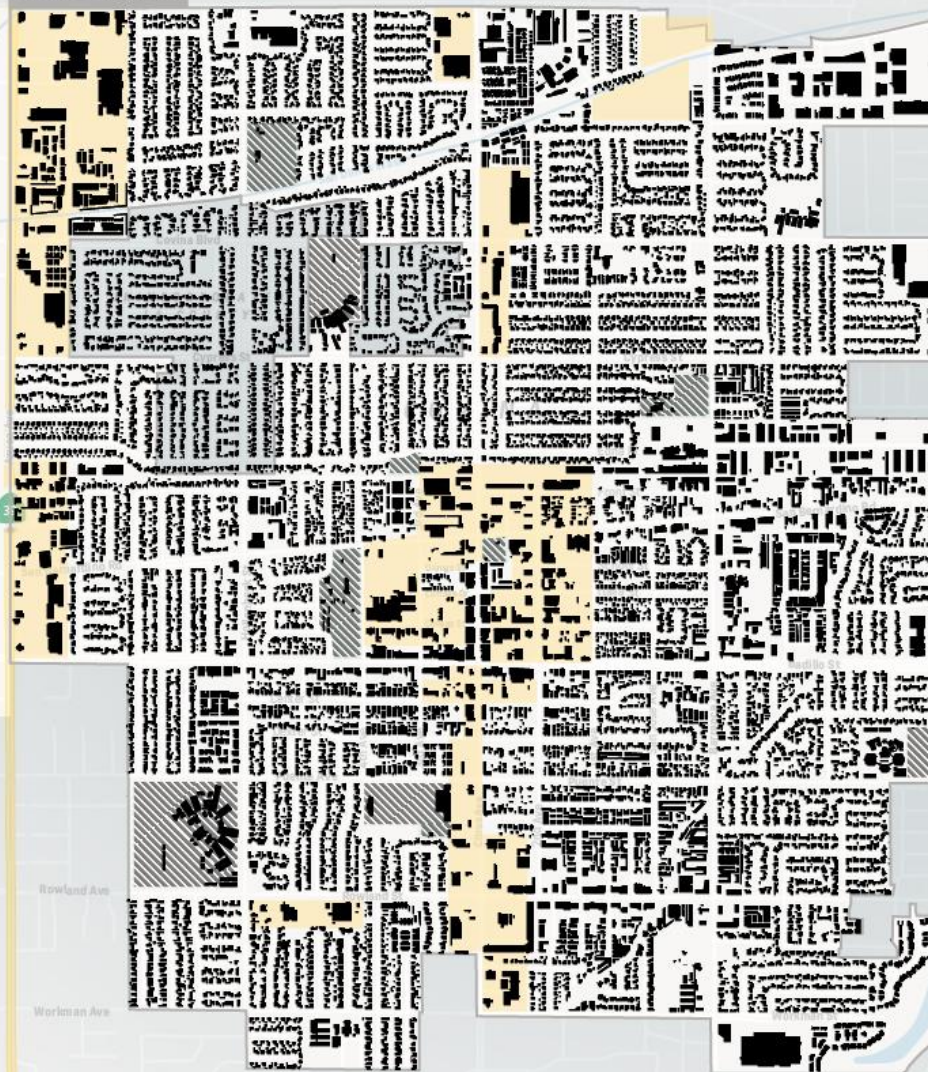
- Environmental Conditions
- Figure-Ground
- Parks and Tree Canopy
- COVID Public Realm Measures
- Traffic Calming
- Sidewalk Conditions
- Excess/Underutilized Vehicle Space
- Image, Districts, and Barriers
- Stormwater Infrastructure



Figure / Ground

- Building Footprints
- Open Space
- Areas with gaps in walkable urban fabric

CASMCP Study Area



KEY TAKE-A-WAYS

Size of the CASMCP Study Area is more community planning scale than neighborhood urban design. Still, clear built form patterns are visible at this scale:

- Consistent detached residential form within residential neighborhoods between major corridors;
- Gaps in walkable urban form spread throughout study area and typical along major corridors
- Significant gaps in walkable urban form (surface parking lots, vacant uses, suburban development pattern) immediately surrounding walkable Downtown along Citrus and Civic Center Park.

Tree Canopy

WITHIN 1/4 mile OF DOWNTOWN

- Large Tree
- Medium Tree
- Small or Newly Planted Tree

CASMCP Study Area

KEY TAKE-A-WAYS

Based on a visual survey, the tree cover is generally the strongest along residential streets, near parks and schools, and along Citrus Avenue in downtown. Tree cover is sparse along industrial areas and major arterials.

No significant discrepancy in tree canopy between Downtown and Disadvantaged/Sensitive Neighborhoods.

While there appears to be some street tree canopy, a majority of street segments are without shade and areas are still dominated by concrete.

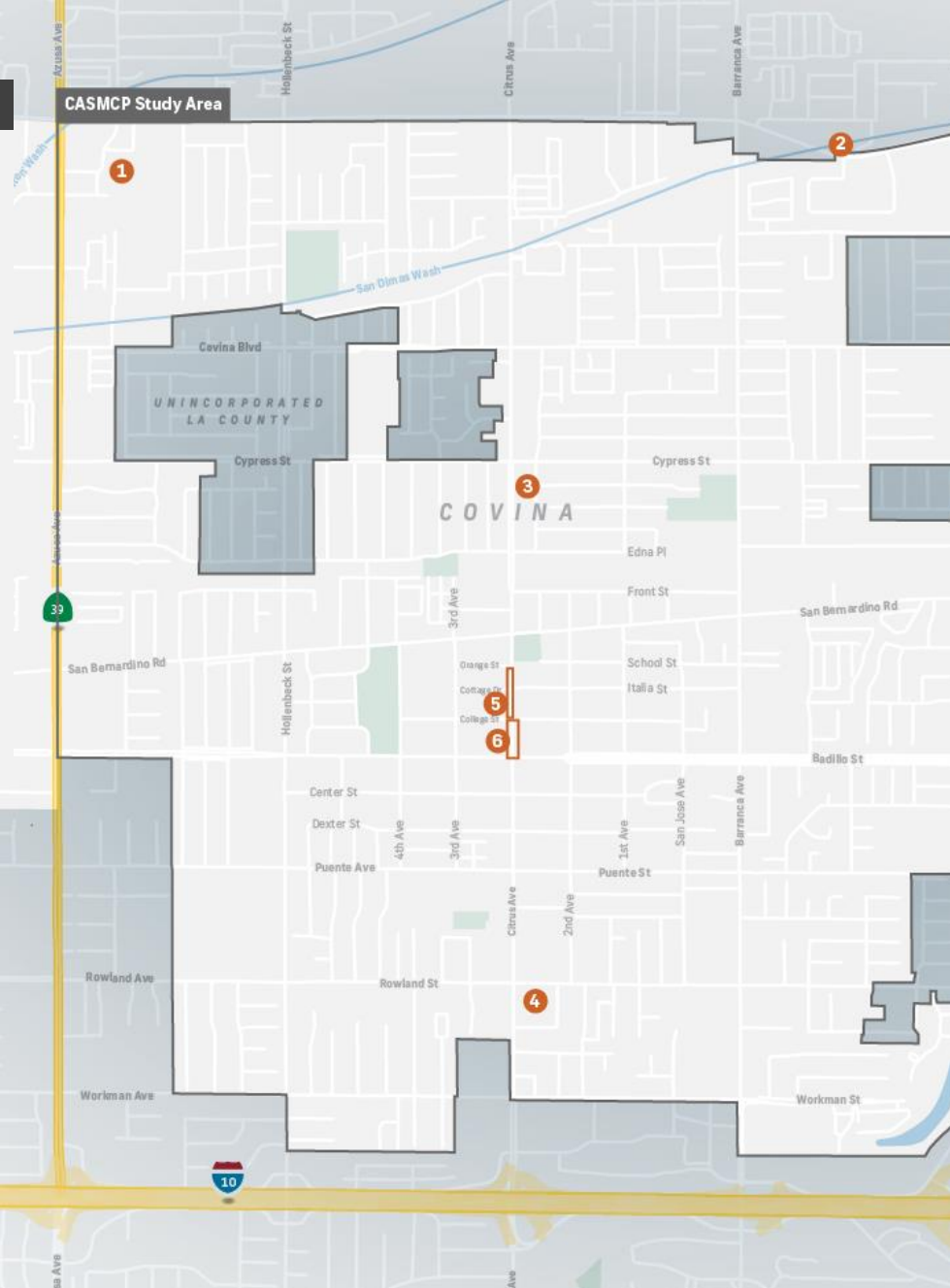
Source: Google Maps, 2022

KEY TAKE-A-WAYS

During the COVID-19 pandemic, many commercial businesses repurposed parking spaces into outdoor dining areas. These locations could potentially provide opportunities and/or partnerships for implementation of permanent pedestrian improvements. It also highlights potential placemaking opportunities in vehicle spaces that are not heavily used.

Source: Google Streetview, December 2020

CASMCP Study Area



1. Covina Town Square



2. Arrow Lodge Brewing



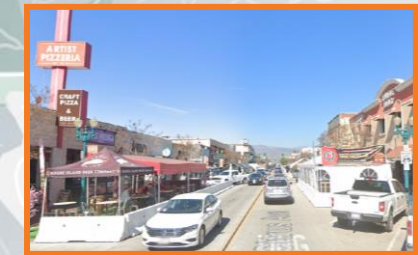
3. Citrus Plaza



4. Shoppers Lane



5. Citrus Avenue outdoor dining on one side of the street

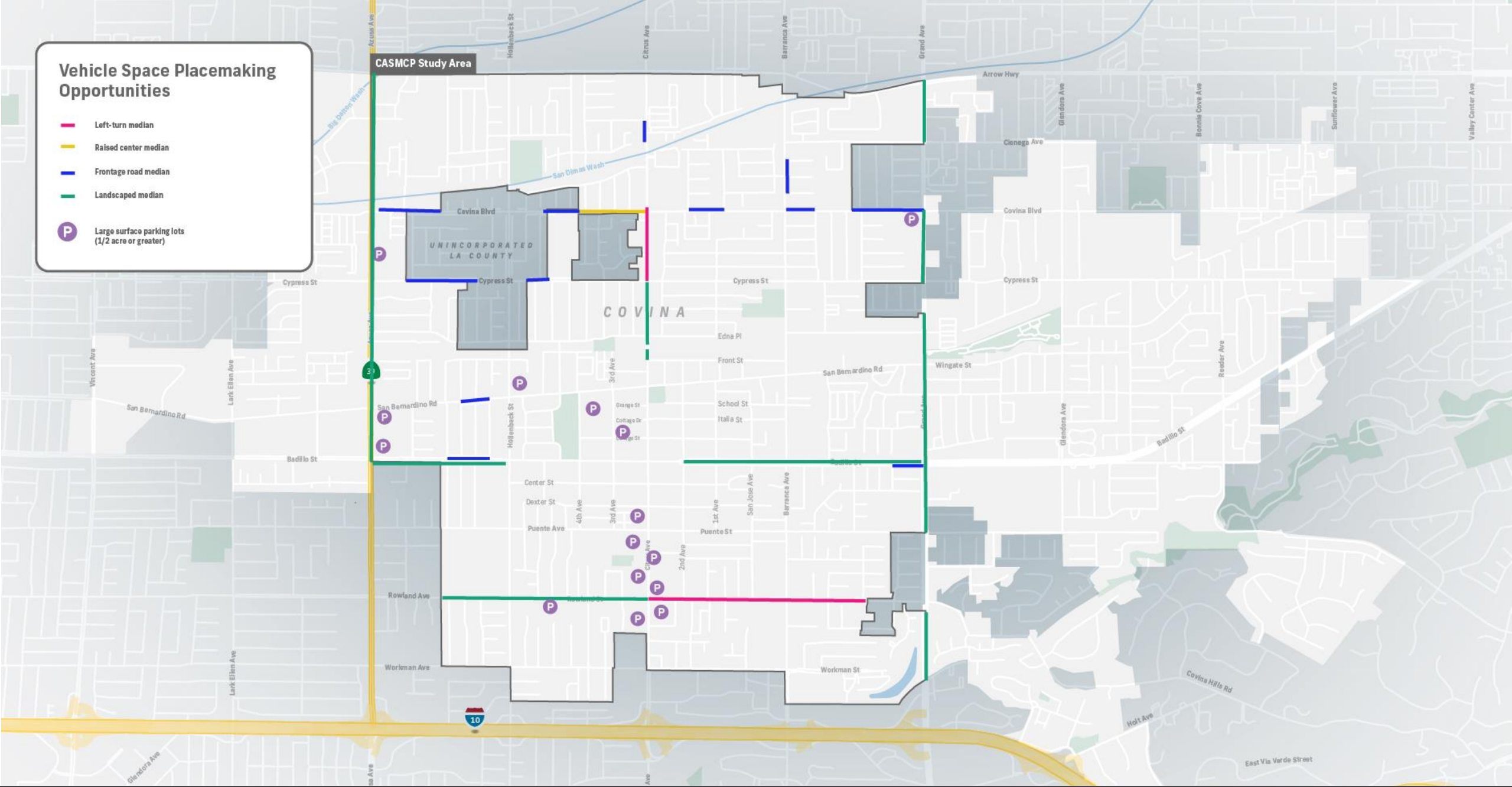


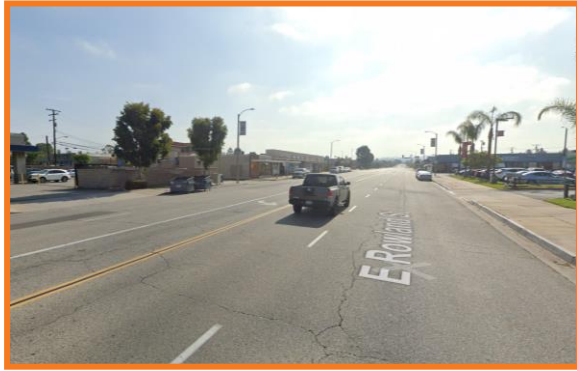
6. Citrus Avenue outdoor dining on both sides of the street

Vehicle Space Placemaking Opportunities

- Left-turn median
- Raised center median
- Frontage road median
- Landscaped median
- P Large surface parking lots (1/2 acre or greater)

CASMCP Study Area





Left-turn median on Rowland Avenue should be studied for needed capacity and opportunity for new multi-modal space and lane realignments.



Transformation of Rosemead Boulevard in Temple City created a protected bicycle lane and green infrastructure from excess roadway capacity.



Raised center median on Covina Boulevard provides no shade, increases burden on stormwater infrastructure and encourages speeding.



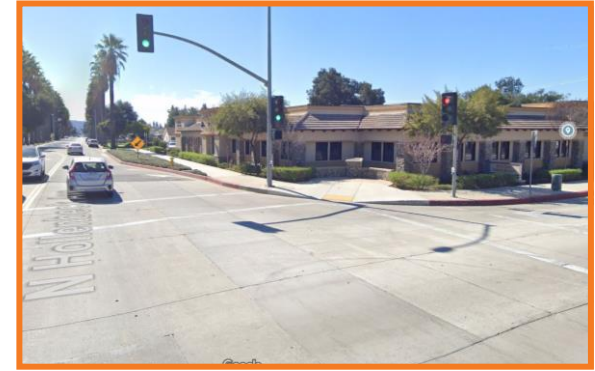
Center median in Paso Robles provides natural habitat, placemaking, and green stormwater infrastructure.



Frontage road on Covina Boulevard with concrete median provides no shade, poor pedestrian paths, and excess parking and travel capacity.



Parkways in Mexico City provide pedestrian walking path, tree canopy, and open space in small and narrow spaces.



Right-turn merge lane (Hollenbeck and San Bernardino) creates poor intersections for pedestrians with long crossing distances and unsafe turning.



Curb extensions shorten pedestrian crossing distances, slow vehicle turning movements, and can be designed for placemaking or green infrastructure.

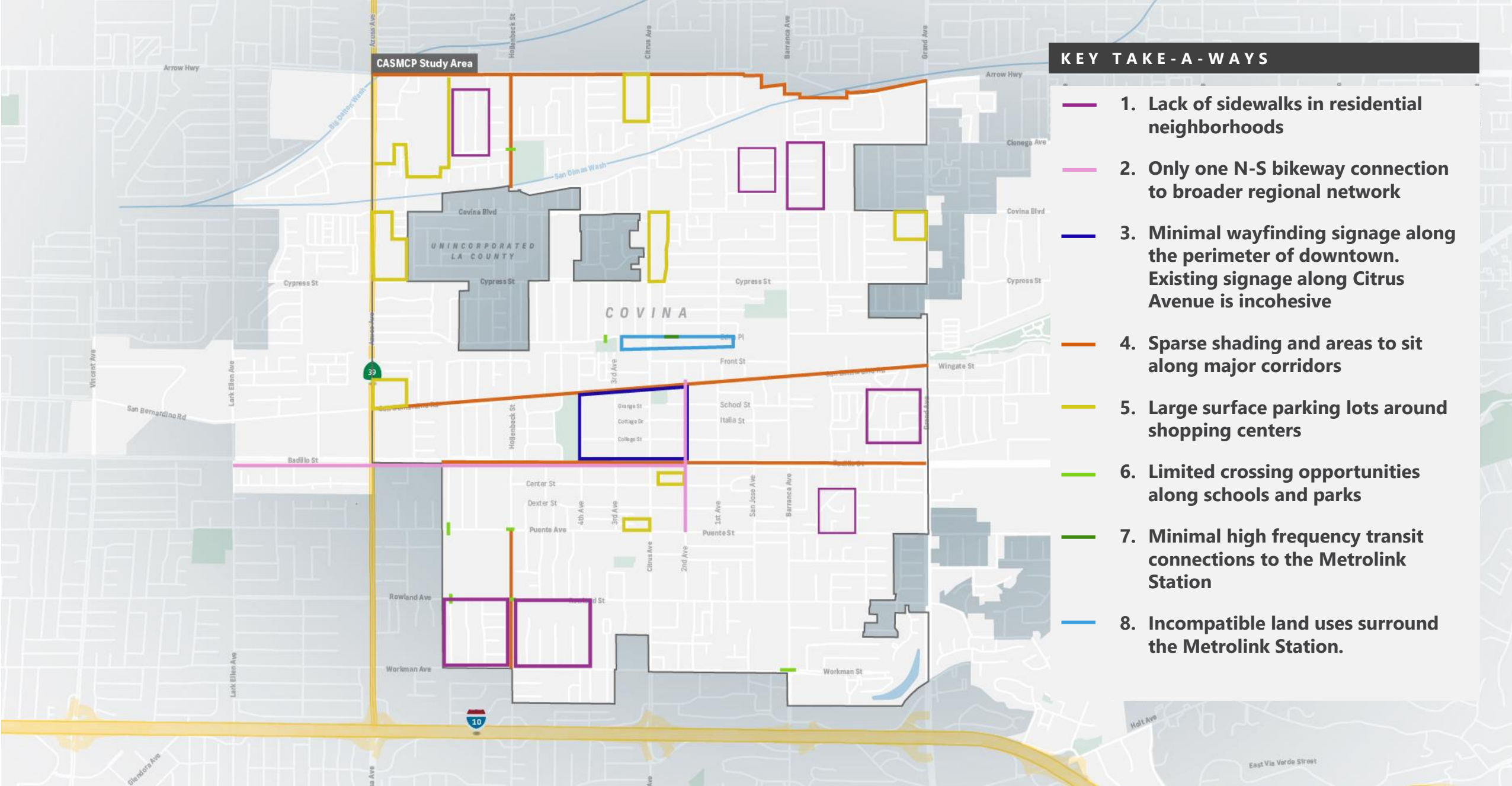
Sidewalk Conditions

Missing Sidewalk

CASMCP Study Area

KEY TAKE-A-WAYS

Many residential neighborhoods are missing sidewalks, which makes walking inconvenient and uncomfortable. This could be a significant barrier in encouraging residents to walk more in their neighborhoods.





No sidewalks in residential areas (Rowland St and Hollenbeck Ave) make walking inconvenient and uncomfortable



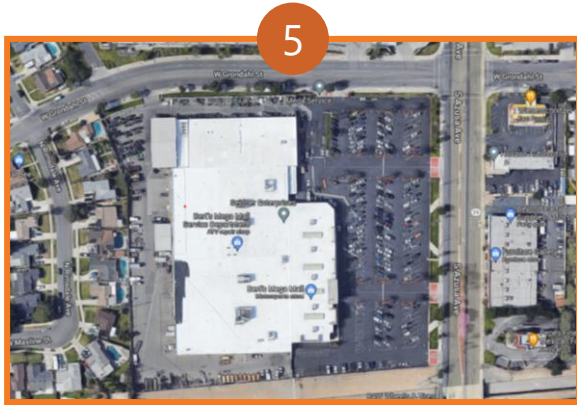
San Gabriel River Trail Entrance at Ramona Blvd/Badillo St with only one bike route connection to broader network



Inconsistent wayfinding style does not support a unifying look or style for downtown



Sparse shading in public right of way on Hollenbeck Ave lends to uncomfortable walking conditions



Large surface parking lots fronting shopping centers create longer walking paths to shop entrances and often puts pedestrians in conflict with motor vehicles.



One signalized crosswalk at Barranca Elementary School leads to uncomfortable walking conditions at key activity centers



One bus route with direct connection to Metrolink Station indicated limited transit connectivity to broader transit network



More compatible uses surrounding the station could be transit-oriented, such as a mix of residential and small-scale retail.

Where Do You Live / Your Neighborhood

- Closest Intersection
- General Area
- Closest Intersection and General Neighborhood Boundary
- Neighborhood
- Relative to Major Street

CASMCP Study Area

NORTH OF CYPRESS

NORTH CITRUS

EAST OF CITRUS

KEY TAKE-A-WAYS

While the sample size of the survey respondents is not large enough to be statistically representative of the entire community, there are some insights into how respondents view their neighborhoods:

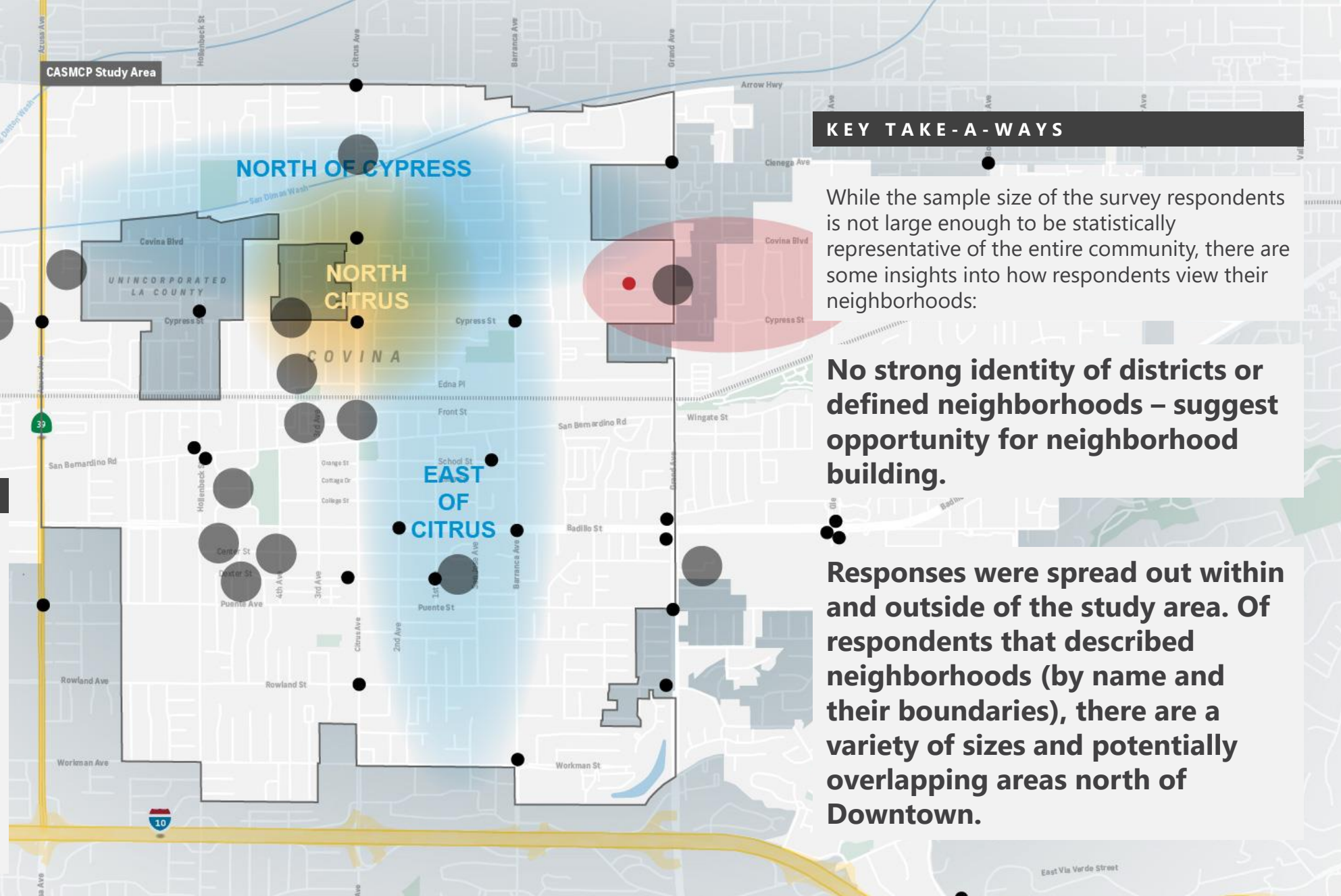
No strong identity of districts or defined neighborhoods – suggest opportunity for neighborhood building.

Responses were spread out within and outside of the study area. Of respondents that described neighborhoods (by name and their boundaries), there are a variety of sizes and potentially overlapping areas north of Downtown.

Purpose

Real and perceived neighborhood boundaries by residents can provide multiple inputs to urban design and active transportation:

- Neighborhood edges identify barriers not easily crossed by communities
- Identify what amenities and services are available/lacking within neighborhoods
- What land uses are important to organizing neighborhoods in the Study Area



Issues and Improvements

Suggested Improvements

● Flashing Crossing Lights

→ Protected Bicycle Lanes

■ Shade

Issues

● Homeless concentrations

↔ Fast-moving vehicles

✕ Unsafe crossing conditions

○ General issues

■ Lack of Lighting

⋯ Poor road/sidewalk conditions

CASMCP Study Area

KEY TAKE-A-WAYS

Issues described are mostly located along major corridors.

Concentrations of issues noted:

- Badillo Street
- San Bernardino Road
- Around Covina Park
- North-South Connections/Crosswalks

There tends to be an overlap of issues regarding homeless, trash, high vehicle speeds, and unsafe crossings. Although survey respondents were spread throughout the Study Area and City, issues appear concentrated between San Bernardino and Badillo.

While the survey is only a small sampling, these issues correlate with data found elsewhere in this study. This includes bicycle and pedestrian collisions mostly occurring along major corridors or in the downtown area. Furthermore, the comments received describe actual experiences by respondents that are still of important note.

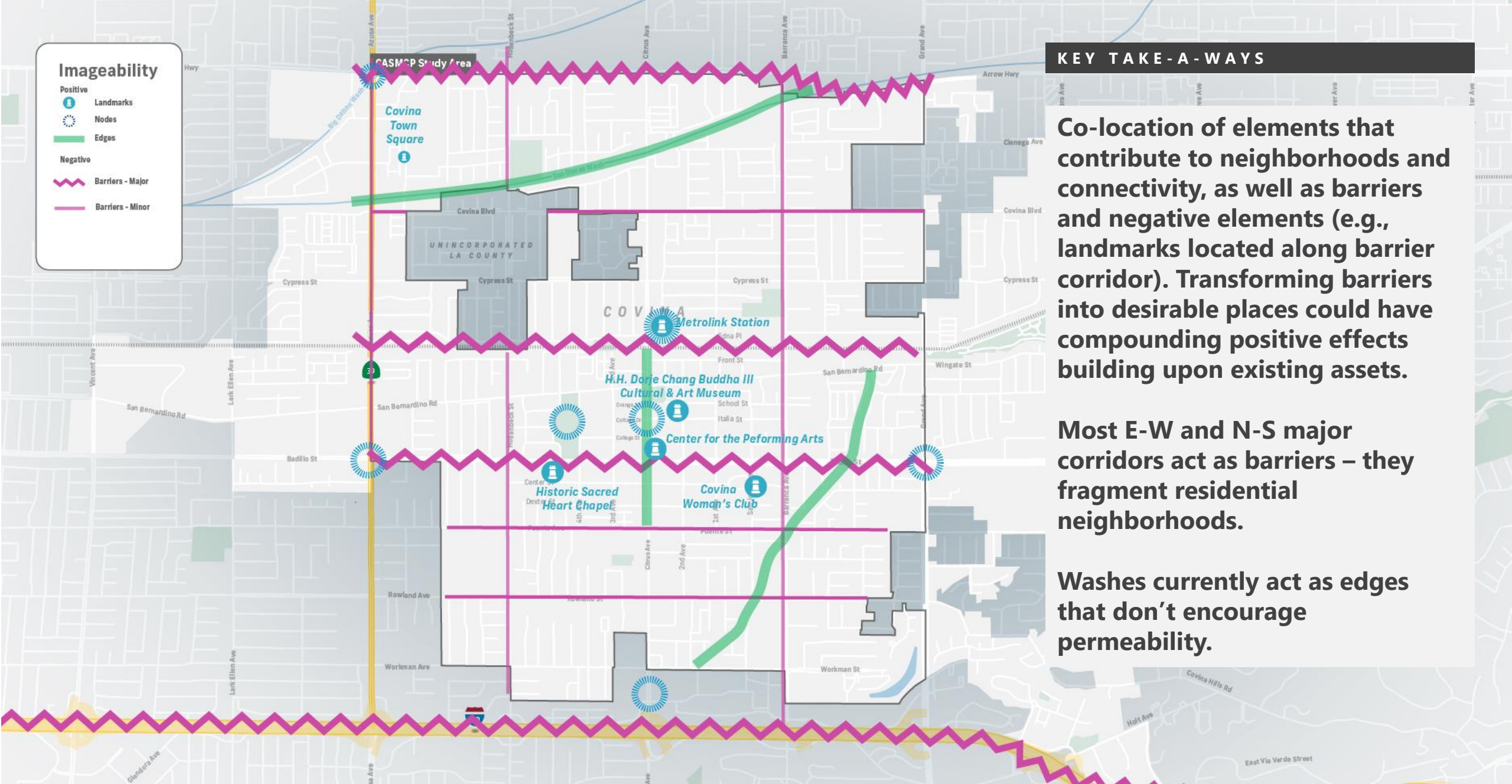
Imageability

Positive

- Landmarks
- Nodes
- Edges

Negative

- Barriers - Major
- Barriers - Minor



KEY TAKE-A-WAYS

Co-location of elements that contribute to neighborhoods and connectivity, as well as barriers and negative elements (e.g., landmarks located along barrier corridor). Transforming barriers into desirable places could have compounding positive effects building upon existing assets.

Most E-W and N-S major corridors act as barriers – they fragment residential neighborhoods.

Washes currently act as edges that don't encourage permeability.

Districts

- Covina Town Square
- Health Services
- Downtown
- Auto Dealerships
- Industrial Park
- Business Park

CASMCP Study Area

STUDY AREA STATS

- A. Covina Town Square** | Several shopping centers within this area. There are also a few adjacent multi-family residential developments such as the Nantucket Village and Covina Grand Apartments
- B. Health Services** | Location of local hospital and several dental and health clinics
- C. Downtown** | Small retailers and local restaurants. Has a more walkable and pedestrian-oriented environment. Also contains several civic facilities (library, city hall) and museums.
- D. Auto Dealership** | Location of several auto dealerships (Chevrolet, Kia, Buick), light auto repair services, such as oil changes, and car rentals.
- E. Industrial Park** | Heavier industrial uses including auto body repair shops.
- F. Business Park** | Several offices in light manufacturing and professional services. Also contains Arrow Lodge Brewing.

Known districts are concentrated at commercial areas. They typically correspond with barrier elements.

Stormwater Infrastructure

Catch Basin

- Side Opening
- Grated

- ### Open Channel
- Improved
 - Swale

CASMCP Study Area

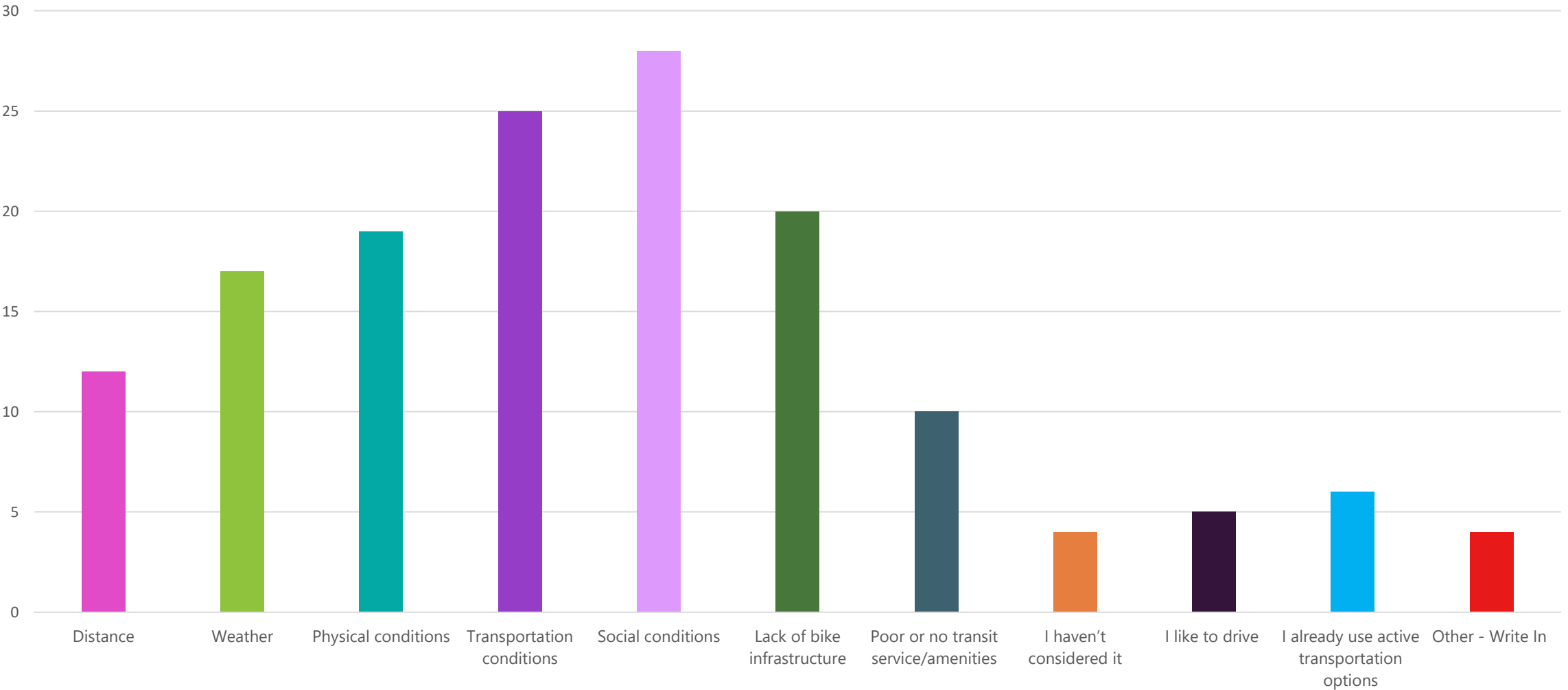
KEY TAKE-A-WAYS

Multiple washes connect through the study area – existing washes are underutilized and could provide opportunities for multi-purpose pathways, greening, and small open spaces.

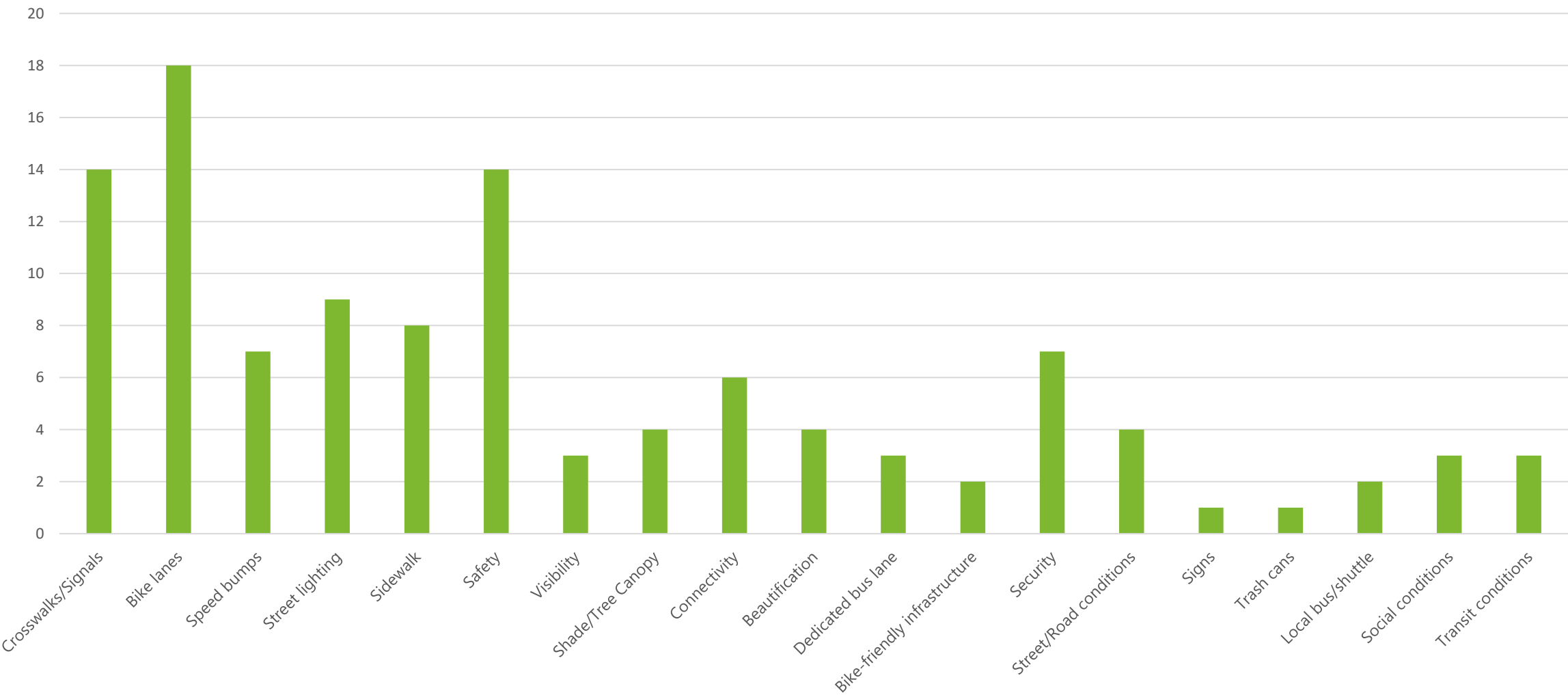
Stormwater catch basins are located throughout study area – mostly located along major corridors but also within residential areas. These provide opportunities for creating small, neighborhood open spaces with a variety of activities.

Coordinate stormwater opportunities with San Gabriel Valley Greenway Network Implementation Plan.

What conditions keep you from using active transportation options to get downtown?



What improvements would you like to see for pedestrians, bikers, and public transit users?



1. Concentrate active transportation improvements on major corridors to increase placemaking and breakdown barriers.

- Many major corridors include frontage roads with concrete medians between frontage road and arterial. These provide excess parking on frontage road and could provide placemaking and open space opportunities.
- Remove merge lanes at intersections and replace with pedestrian space.
- Employ typical traffic calming, reduction of space devoted to vehicles, etc.

2. The CASMCP Study Area is a large area that can be considered holistically; it can also support multiple neighborhood centers and can be considered at multiple smaller scales.

- Downtown is beyond the typical walkshed for large majority of the Study Area.
- Propose neighborhood centers at locations so the entire Study area is within a ½ mile walkshed. Develop tailored public- and private- realm strategies to encourage public and private realm redevelopment to create walkable town centers.

3. Integrate and leverage small urban design improvements with other disciplines – multi-modal transportation, stormwater, climate resiliency and adaptation, etc.

- There are many underutilized areas that could provide passive or active benefits to neighborhood character and active transportation modes: concrete medians (center and frontage), stormwater catch basins.
- Urban design improvements need to leverage available funding opportunities for improvements – street resurfacing, stormwater/water quality improvements, etc.

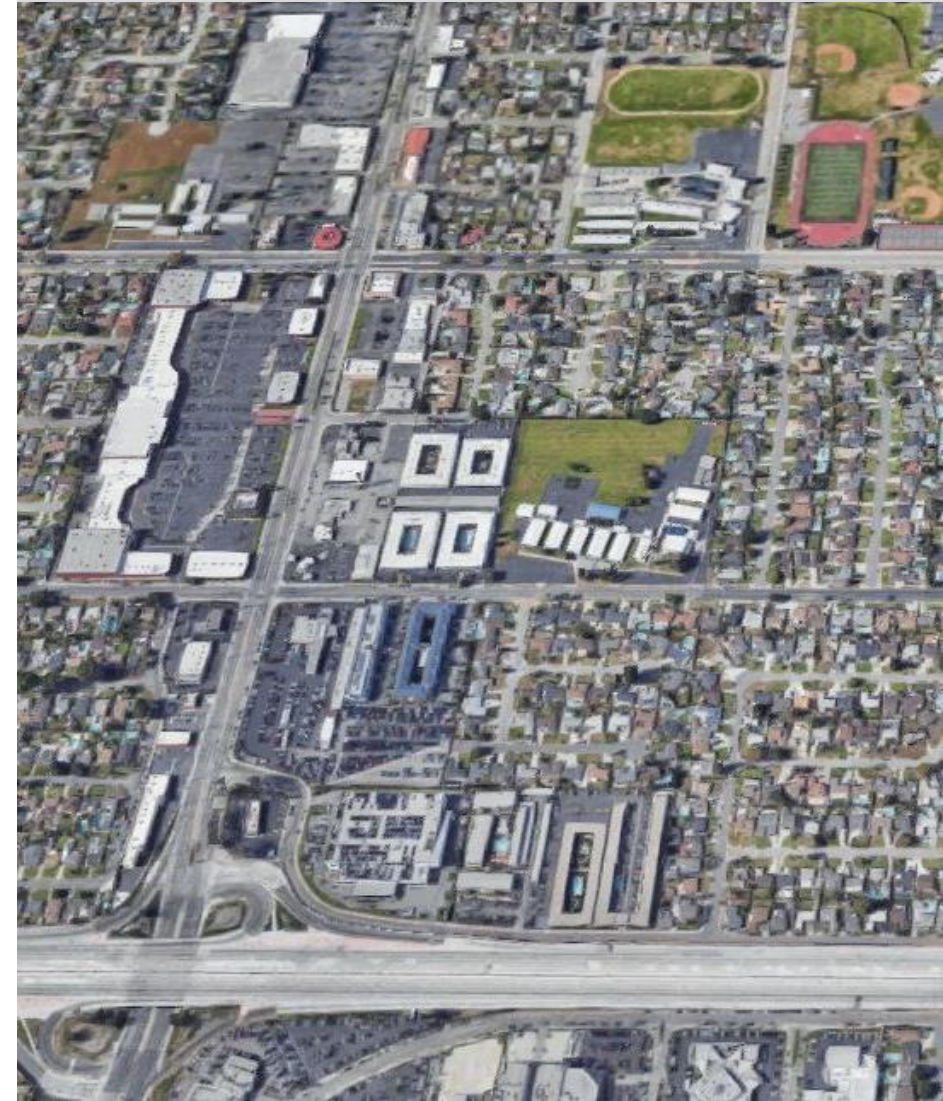
San Dimas Wash at Barranca Avenue – provides multiple opportunities from small, neighborhood open space for local residents; multi-modal transportation corridors; placemaking opportunities responding to, and promoting, adjacent development; and opportunities to provide a naturalized environment to improve climate resiliency, reduce heat island impacts, reduce grey infrastructure, and improve water quality and water capture.



4. Next steps of this study should develop more engagement for how people define their immediate neighborhood and that relationship to their active transportation behaviors.

- Where are formal and informal neighborhood boundaries?
- What are the sizes of neighborhoods in Covina and what services and opportunities are available within neighborhoods? I.e., grocery stores, transit stops, neighborhood services, etc.
- How often are people walking/biking within their neighborhoods (dog walk, to the park, etc.) versus walking/biking to places outside their neighborhoods?

Census tract 4062 is in close proximity to Interstate 10, more than a mile from Downtown, and bordered by Azusa Avenue. These factors create barriers and represents car-oriented development patterns. There is opportunity for multi-disciplinary approach to encourage a walkable neighborhood center.



Appendix C - Market Study

CITY OF COVINA

CASMCP MARKET STUDY

November 2022



1230 Rosecrans Ave., Suite 630
Manhattan Beach, CA 90266
TEL: 424-297-1070 | URL: www.kosmont.com

OVERVIEW

- Kosmont Companies (“Kosmont”) is a nationally-recognized real estate and economics advisory firm providing market and economic development services for hundreds of public and private sector clients during the past 35 years.
- Kosmont has been retained to assist Fehr & Peers with the City’s Active Streets and Multimodal Connectivity Plan (“CASMCP”), evaluating existing conditions within the key corridors related to demographic, economic and real estate market opportunities for multi-family, retail, office and hospitality development based on transit improvements.
- Transit systems serving downtown Covina include the Foothill Transit Center, Park & Ride and the Metrolink Station. Located a few miles north on Citrus is the Azusa Metro Gold Line.
- Covina has three vibrant commercial corridors (Citrus Ave., San Bernardino Road and Badillo Ave.) with hundreds of residential units blended with over 1 million SF of retail. The CASMCP will play a major role in improving the economic strength of those corridors by encouraging more pedestrian activity.

DEMOGRAPHIC HIGHLIGHTS

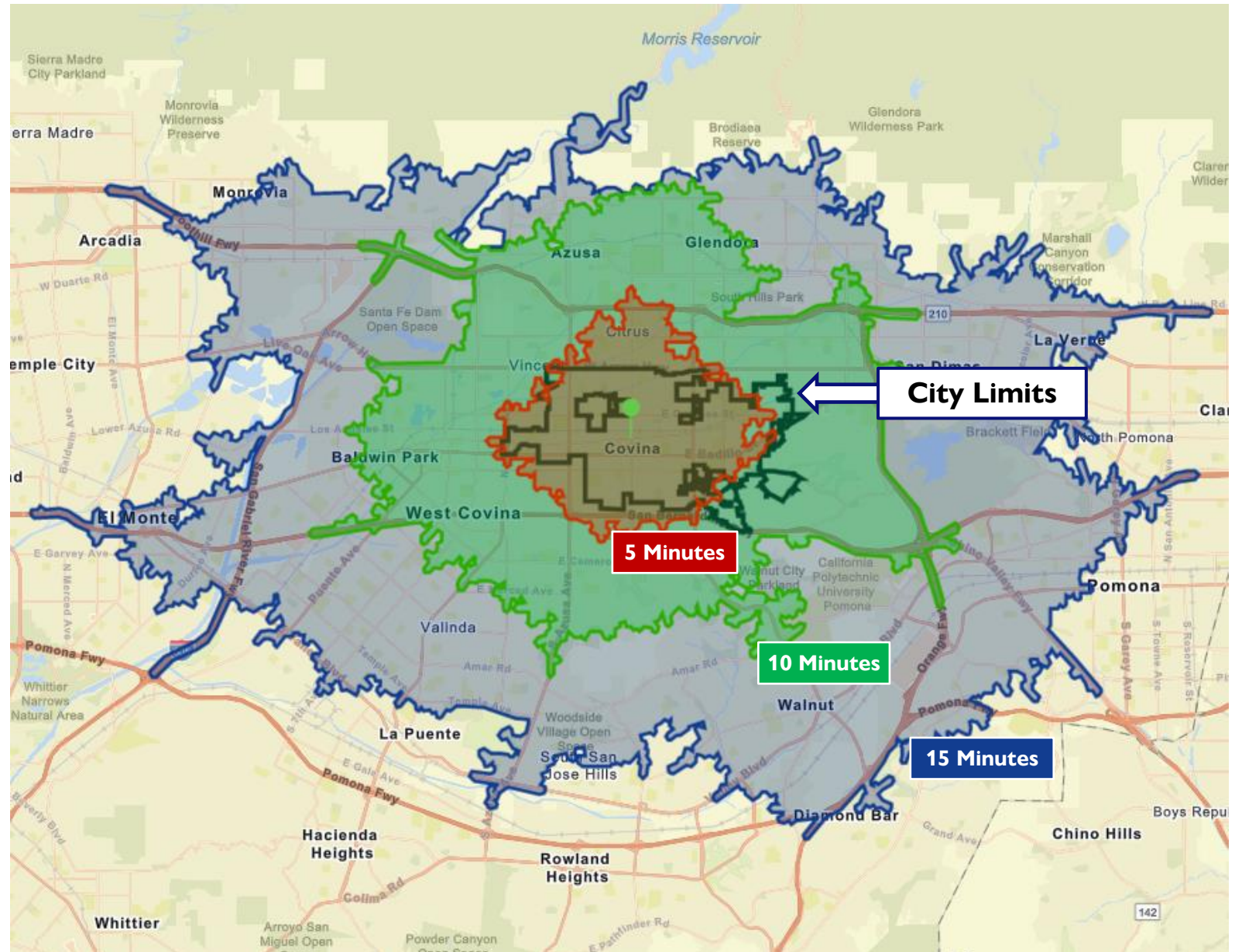
- Covina has a population of ~51,300, seeing total population growth of ~7.7% since 2000
- **Average Household Size** is 3.0 persons, and the **Median Age** is 37.1 years; ~29% of residents achieved at least a bachelors degree, lower than county / state averages
- City **Average Household Income** is \$109,300, approx. ~10% lower than Los Angeles County and 20% lower than statewide levels
- Approximately 77,500 people live within a 5-minute drive of the downtown Covina area
- Covina sees a small net **Inflow** of 544 jobs, with 21,800 workers commuting from nearby communities to jobs in the City of Covina and 21,300 workers commuting to surrounding job centers such as Los Angeles, West Covina, Industry, and Glendora
- **Jobs in the City** are primarily in the Health Care, Retail Trade, Administration / Support, and Accommodation / Food Service sectors
- **Residents of the City** are primarily employed in the Health Care, Education, Retail Trade, and Accommodation / Food Service sectors

POPULATION & INCOME

CITY, COUNTY, AND STATE

	Covina City	Los Angeles County	California State
Population	51,300	9,992,600	39,770,500
Households	16,900	3,425,800	13,570,100
Average HH Size	3.0	2.9	2.9
Median Age	37.1	36.4	36.7
% Bachelor's Degree or Higher	28.9%	37.0%	37.8%
Per Capita Income	\$36,000	\$41,200	\$44,300
Median HH Income	\$84,600	\$81,400	\$88,900
Average HH Income	\$109,300	\$119,800	\$129,400
Median Home Value	\$616,300	\$690,900	\$629,200

DRIVE TIMES



POPULATION & INCOME

5-, 10-, AND 15-MINUTE DRIVE TIME AREAS

	5 Minute Drive	10 Minute Drive	15 Minute Drive
Population	77,500	278,600	673,600
Households	24,500	85,500	199,800
Average HH Size	3.1	3.2	3.3
Median Age	35.7	36.4	35.9
% Bachelor's Degree or Higher	26.8%	29.4%	29.3%
Per Capita Income	\$32,700	\$35,300	\$33,800
Median HH Income	\$82,400	\$90,300	\$87,900
Average HH Income	\$103,000	\$114,900	\$113,500
Median Home Value	\$594,100	\$621,900	\$615,100

MAJOR EMPLOYERS

CITY'S LARGEST EMPLOYERS ARE EDUCATION, HEALTHCARE, AND MAJOR RETAILERS

Among the top ten employers in the City, three are healthcare related, three are school districts / local government, three are major big box retailers, and one is an aerospace components firm.

Five of these major employers have operations within the CASMCP area, with several others located just outside of CASMCP boundaries, suggesting workers at these firms could benefit from active transportation improvements.

Major Employers in Covina

<i>Major Employer</i>	<i>Type</i>	<i>Employees</i>	<i>In CASMCP Study Area?</i>
Covina Valley Unified School District*	Education	1,365	Yes
Citrus Valley Health Partners-Intercommunity*	Healthcare	829	Yes
Charter Oak Unified School District	Education	630	East of Area
Charter Homehealth	Healthcare	535	East of Area
Ikea U.S. West, Inc.*	Retail	325	Yes
Wal-Mart	Retail	265	Just West of Area
City of Covina*	Government	244	Yes
VITAS Innovative Hospice Care*	Healthcare	221	Yes
The Home Depot	Retail	211	Just West of Area
Composites Horizons LLC	Aerospace	204	West of Area

MEANS OF TRANSPORTATION & COMMUTE TIME

Approximately 75% of Covina workers drove alone to work, similar to County and State averages.

An estimated 12% of Covina workers carpool, 5% use public transportation and 6% are working from home.

Means of Transportation to Work			
	Covina City	LA County	California
Drove Alone to Work	74.7%	72.2%	72.1%
Carpooled	12.2%	9.5%	10.0%
Public Transportation	4.9%	5.4%	4.6%
Bicycle	0.5%	0.7%	0.8%
Walked	0.9%	2.6%	2.5%
Other	0.9%	1.7%	1.6%
Worked at Home	6.0%	8.0%	8.4%

Commute Time			
	Covina City	LA County	California
Less than 15 minutes	19%	17%	21%
15 - 29 minutes	27%	32%	35%
30 - 44 minutes	22%	26%	22%
45- 59 minutes	11%	11%	9%
60- 89 minutes	15%	11%	8%
90+ minutes	6%	4%	4%

WORKER INFLOW / OUTFLOW

CITY SEES SMALL NET OUTFLOW OF WORKERS

Covina sees a small net inflow of workers from other communities. Approx. 7% of residents/workers stay within the city, while the vast majority commute to/from other locations.

Worker Inflow/Outflow (2019)	
Workers Living & Working	1,675
Workers Coming (Inflow)	21,817
Workers Going (Outflow)	21,273
Net Inflow/Outflow	544
Employment Ratio*	1.02

Source: U.S. Census Bureau Center for Economic Studies (2019, Accessed July 2022)

Notes: ***Employment Ratio** = People employed within City (living and working in City + those who come into the City for work) / Employed population of City (living and working in City + workers who live in the City, but work outside of the City)



WORKER DESTINATIONS & ORIGINS CITY OF COVINA

- Workers who live in Covina primarily work in Los Angeles, Covina, West Covina, Industry, and Glendora.
- Employees who work in Covina primarily live in Covina, Los Angeles, West Covina, Pomona, and Glendora.
- Approx. 18% of Covina residents commute to locations in Covina or adjoining communities, and ~21% of Covina workers come from Covina or adjoining communities; these commuters would be the most likely to shift modes of transportation.

Outflow: Where Covina Residents Commute To		
City	Count	Percentage
Los Angeles	2,889	12.6%
Covina	1,675	7.3%
West Covina	966	4.2%
Industry	747	3.3%
Glendora	560	2.4%
Ontario	498	2.2%
San Dimas	487	2.1%
Anaheim	475	2.1%
Pasadena	474	2.1%
Pomona	474	2.1%
Baldwin Park	442	1.9%
Azusa	406	1.8%
El Monte	398	1.7%
Irwindale	361	1.6%
Arcadia	359	1.6%
Monrovia	324	1.4%
Chino	323	1.4%
Brea	301	1.3%
Irvine	276	1.2%
Duarte	256	1.1%
Other	10,257	44.7%

Inflow: Where Covina Workers Come From		
City	Count	Percentage
Covina	1,675	7.1%
Los Angeles	1,399	6.0%
West Covina	1,374	5.8%
Pomona	886	3.8%
Glendora	781	3.3%
Azusa	608	2.6%
Baldwin Park	603	2.6%
San Dimas	527	2.2%
Rancho Cucamonga	460	2.0%
Ontario	439	1.9%
El Monte	381	1.6%
Upland	372	1.6%
Fontana	369	1.6%
Vincent	357	1.5%
Chino	351	1.5%
Anaheim	330	1.4%
La Verne	307	1.3%
Chino Hills	293	1.2%
Diamond Bar	275	1.2%
La Puente	265	1.1%
Other	11,440	48.7%

EMPLOYMENT BY INDUSTRY CITY OF COVINA

- Workers who live in Covina primarily work in the Health Care, Education, Retail Trade, Accommodation / Food Service, and Manufacturing industries.
- Employees who work in Covina primarily work in the Health Care, Retail Trade, Administration / Support, Accommodation / Food Service, and Education industries.

City Resident Employed Population (Age 16+)

Industry Sector	Count	%
Health Care and Social Assistance	3,658	15.9%
Educational Services	2,371	10.3%
Retail Trade	2,311	10.1%
Accommodation and Food Services	2,092	9.1%
Manufacturing	1,758	7.7%
Administration & Support, Waste Management and Remediation	1,673	7.3%
Wholesale Trade	1,377	6.0%
Construction	1,192	5.2%
Professional, Scientific, and Technical Services	1,090	4.7%
Public Administration	1,005	4.4%
Transportation and Warehousing	993	4.3%
Finance and Insurance	723	3.2%
Other Services (excluding Public Administration)	702	3.1%
Information	493	2.1%
Management of Companies and Enterprises	396	1.7%
Arts, Entertainment, and Recreation	385	1.7%
Real Estate and Rental and Leasing	349	1.5%
Utilities	235	1.0%

Workers Employed Within City

Industry Sector	Count	%
Health Care and Social Assistance	5,355	22.8%
Retail Trade	3,015	12.8%
Administration & Support, Waste Management and Remediation	2,897	12.3%
Accommodation and Food Services	2,426	10.3%
Educational Services	2,204	9.4%
Manufacturing	1,371	5.8%
Professional, Scientific, and Technical Services	1,266	5.4%
Construction	872	3.7%
Other Services (excluding Public Administration)	861	3.7%
Public Administration	665	2.8%
Finance and Insurance	622	2.6%
Real Estate and Rental and Leasing	511	2.2%
Wholesale Trade	491	2.1%
Management of Companies and Enterprises	485	2.1%
Transportation and Warehousing	241	1.0%
Information	101	0.4%
Arts, Entertainment, and Recreation	90	0.4%
Utilities	15	0.1%

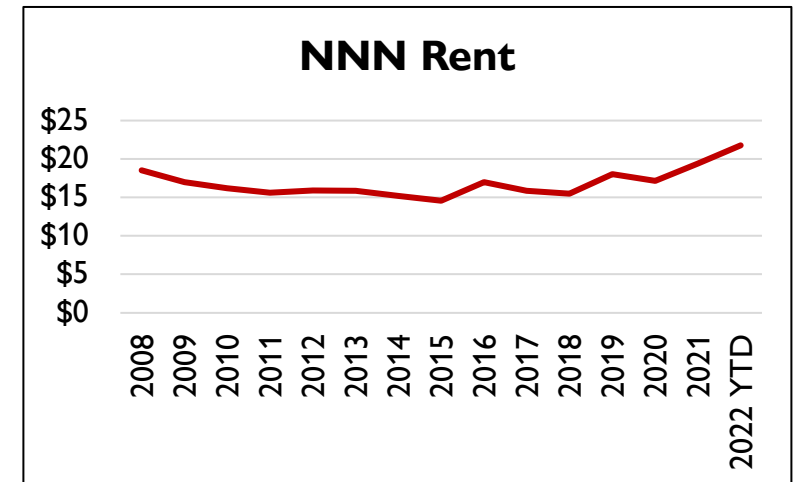
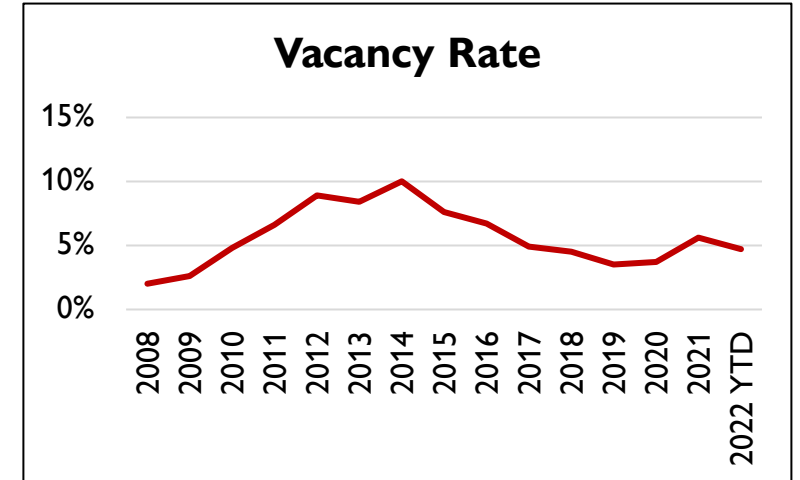
COMMERCIAL REAL ESTATE SUPPLY & DEMAND SUMMARY

- The Eastern San Gabriel Valley **retail** submarket has seen little growth, with the submarket seeing a decline of -220,000 SF of retail space over the past 5 years. The City has captured ~10% of the regional supply in the local submarket. The City's vacancy rate has fallen from ~10% in 2014 to 4.7% in 2022, with NNN rents approaching \$21.80.
- The Eastern San Gabriel Valley **office** submarket is stable, growing 1.6% over the past decade, with Covina providing ~11% of regional supply. New development activity is focused on medical office and build-to-suits for traditional tenants. Much of the office inventory in the downtown Covina area is medical office, centered around the Citrus Valley Intercommunity Hospital. Vacancy has fallen from ~12% in 2011 to ~3% in 2022, with gross rents of \$23.
- The **multi-family residential** submarket is extremely strong. The City of Covina represents ~8% of regional supply, with the City's inventory adding 42 units over the past decade. Vacancy reached new lows of 1.5% starting in 2020; while rents have grown steadily, reaching ~\$1,800 per month per unit in 2022.
- The City of Covina only has two **hotels**: the 262-room midscale Vanllee Hotel & Suites located near the I-10 and the 26-room economy Evergreen Inn located on Arrow Highway. A 68-room midscale Avid Covina hotel is proposed for a site on Azusa Ave near San Bernardino Road.

RETAIL MARKET HISTORY

CITY OF COVINA

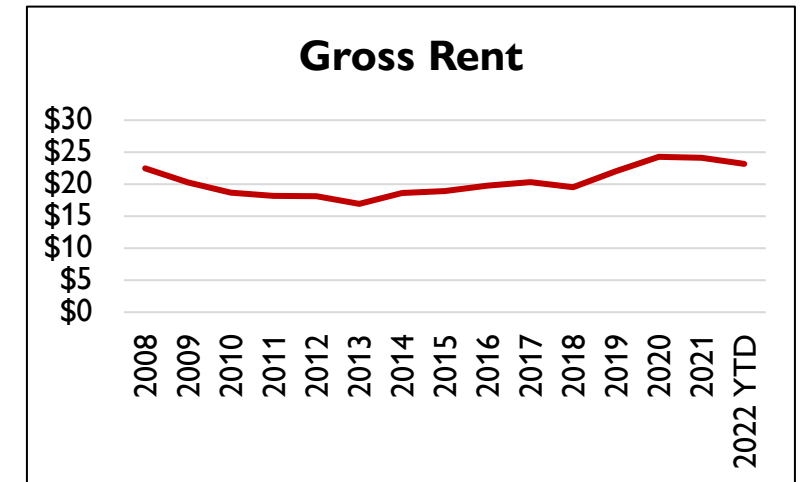
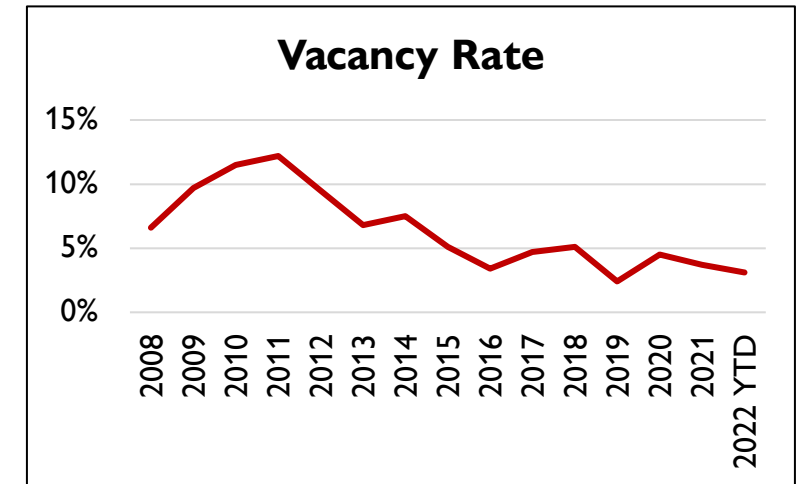
Year	Inventory SF	Vacant SF Total	Vacant Percent % Total	Net Absorption SF Total	NNN Rent Overall
2022 YTD	4,215,123	198,039	4.7%	40,346	\$21.79
2021	4,212,637	235,899	5.6%	(97,497)	\$19.42
2020	4,231,620	157,385	3.7%	(12,154)	\$17.17
2019	4,235,872	149,483	3.5%	17,460	\$18.02
2018	4,259,867	190,938	4.5%	(86,724)	\$15.48
2017	4,368,042	212,389	4.9%	78,470	\$15.87
2016	4,368,042	290,859	6.7%	43,037	\$17.00
2015	4,368,042	333,896	7.6%	102,796	\$14.57
2014	4,368,042	436,692	10.0%	(69,483)	\$15.19
2013	4,368,042	367,209	8.4%	62,070	\$15.86
2012	4,323,042	384,279	8.9%	(84,060)	\$15.90
2011	4,309,005	286,182	6.6%	(80,582)	\$15.63
2010	4,310,744	207,339	4.8%	11,862	\$16.22
2009	4,200,445	108,902	2.6%	(25,608)	\$16.99
2008	4,200,445	83,294	2.0%	101,726	\$18.55



OFFICE MARKET HISTORY

CITY OF COVINA

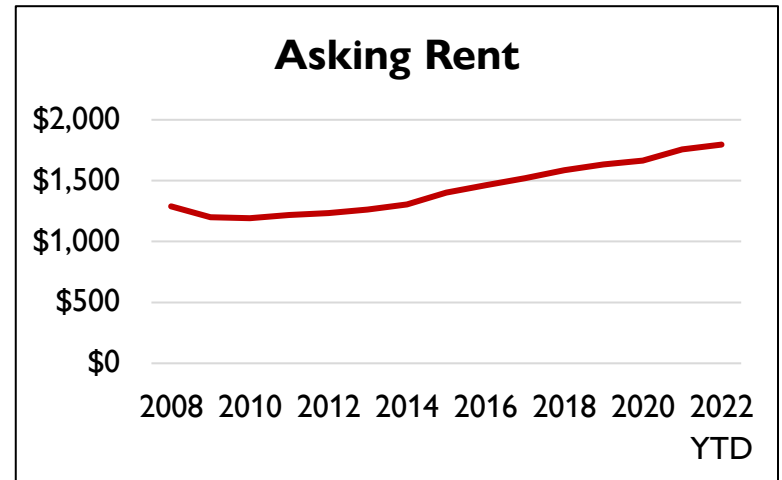
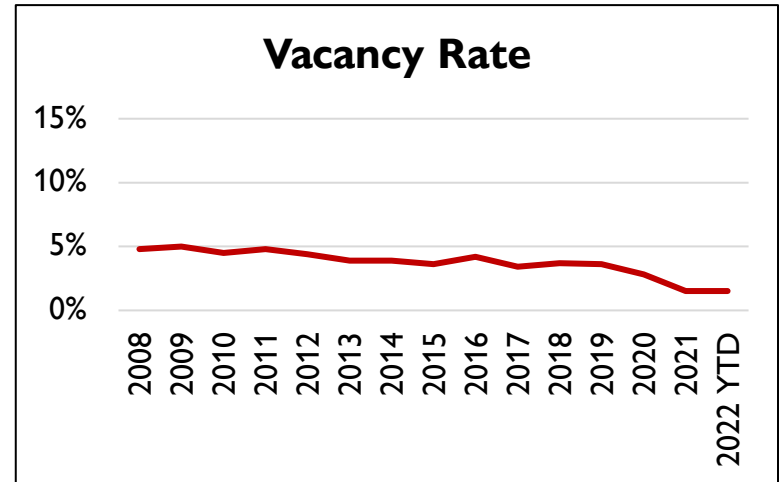
Year	Inventory SF	Vacant SF Total	Vacant Percent % Total	Net Absorption SF Total	Gross Rent Overall
2022 YTD	2,018,816	63,582	3.1%	11,444	\$23.16
2021	2,018,816	75,026	3.7%	12,056	\$24.12
2020	2,023,336	91,602	4.5%	(42,460)	\$24.26
2019	2,023,336	49,142	2.4%	53,427	\$22.05
2018	2,023,336	102,569	5.1%	(6,668)	\$19.55
2017	2,023,336	95,901	4.7%	(27,736)	\$20.32
2016	2,023,336	68,165	3.4%	35,138	\$19.79
2015	2,023,336	103,303	5.1%	47,471	\$18.95
2014	2,023,336	150,774	7.5%	(25,053)	\$18.66
2013	2,036,137	138,522	6.8%	54,364	\$16.93
2012	2,036,137	192,886	9.5%	35,954	\$18.16
2011	2,057,954	250,657	12.2%	(13,908)	\$18.19
2010	2,057,954	236,749	11.5%	(37,365)	\$18.68
2009	2,057,954	199,384	9.7%	(62,893)	\$20.30
2008	2,057,954	136,491	6.6%	15,310	\$22.50



MULTIFAMILY MARKET HISTORY

CITY OF COVINA

Year	Inventory Units	Vacant Units	Vacancy Percent	Net Absorption (Units)	Asking Rent (Unit/Mo.)
2021	5,148	75	1.5%	14	\$1,795
2020	5,138	79	1.5%	63	\$1,756
2019	5,138	142	2.8%	62	\$1,666
2018	5,119	184	3.6%	4	\$1,633
2017	5,119	188	3.7%	(15)	\$1,587
2016	5,119	173	3.4%	47	\$1,520
2015	5,114	216	4.2%	(22)	\$1,463
2014	5,106	186	3.6%	16	\$1,403
2013	5,106	201	3.9%	-	\$1,306
2012	5,106	201	3.9%	25	\$1,262
2011	5,106	226	4.4%	17	\$1,234
2010	5,106	243	4.8%	(13)	\$1,217
2009	5,106	231	4.5%	26	\$1,192
2008	5,106	257	5.0%	(10)	\$1,199
2007	5,106	246	4.8%	(58)	\$1,290

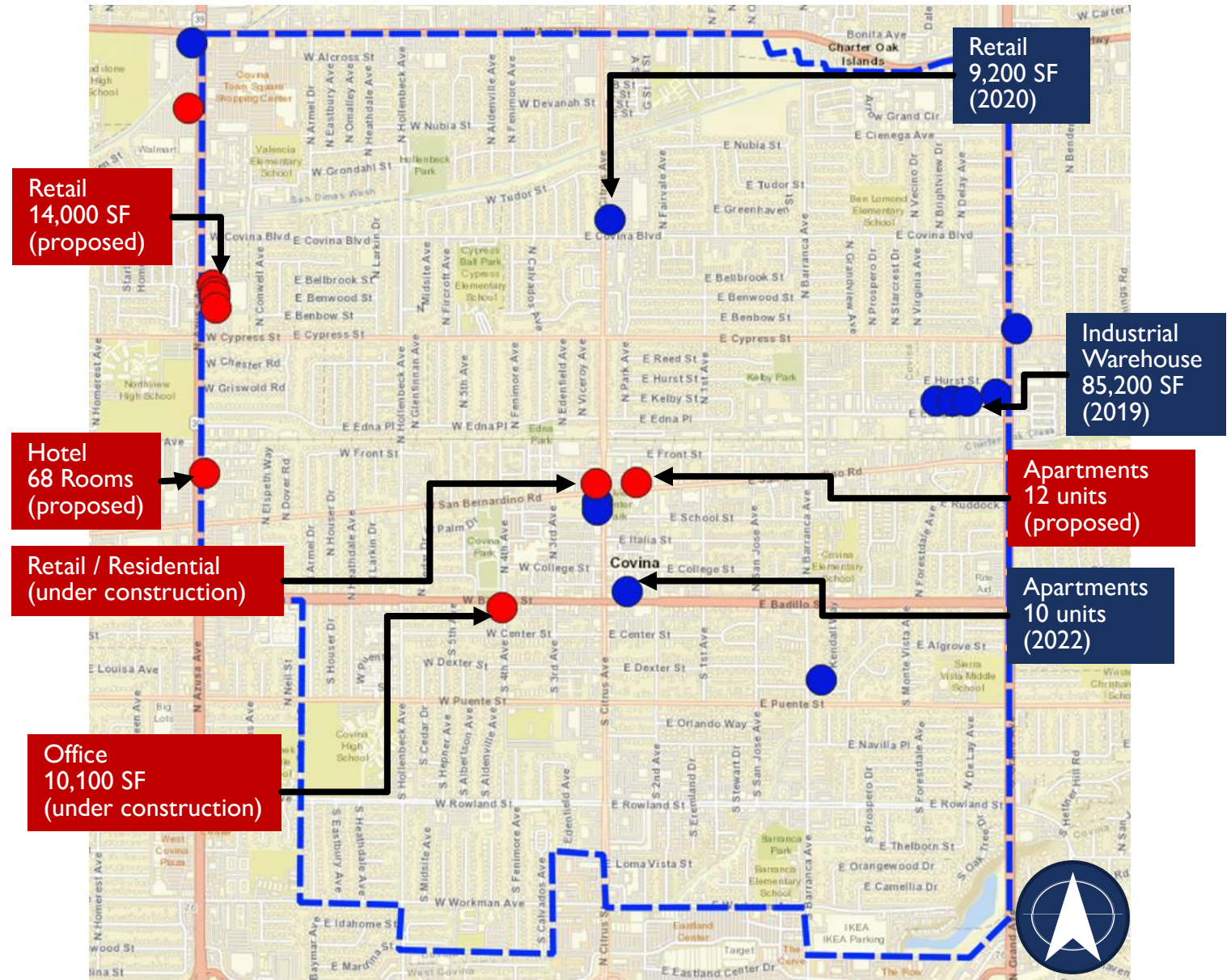


COVINA CASMCP STUDY AREA

RECENT / UPCOMING CONSTRUCTION

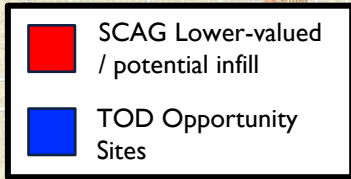
According to CoStar property data, the Study Area includes a number of recent development projects, as well as a few projects that are under construction or proposed (not necessarily entitled).

Private sector development is often centered along the Citrus Ave, San Bernardino Rd, and Badillo St corridors.



COMMERCIAL/RETAIL POTENTIAL DEVELOPMENT

The Transit Oriented Development Opportunity Sites were identified in the project's RFP as locations with development potential.



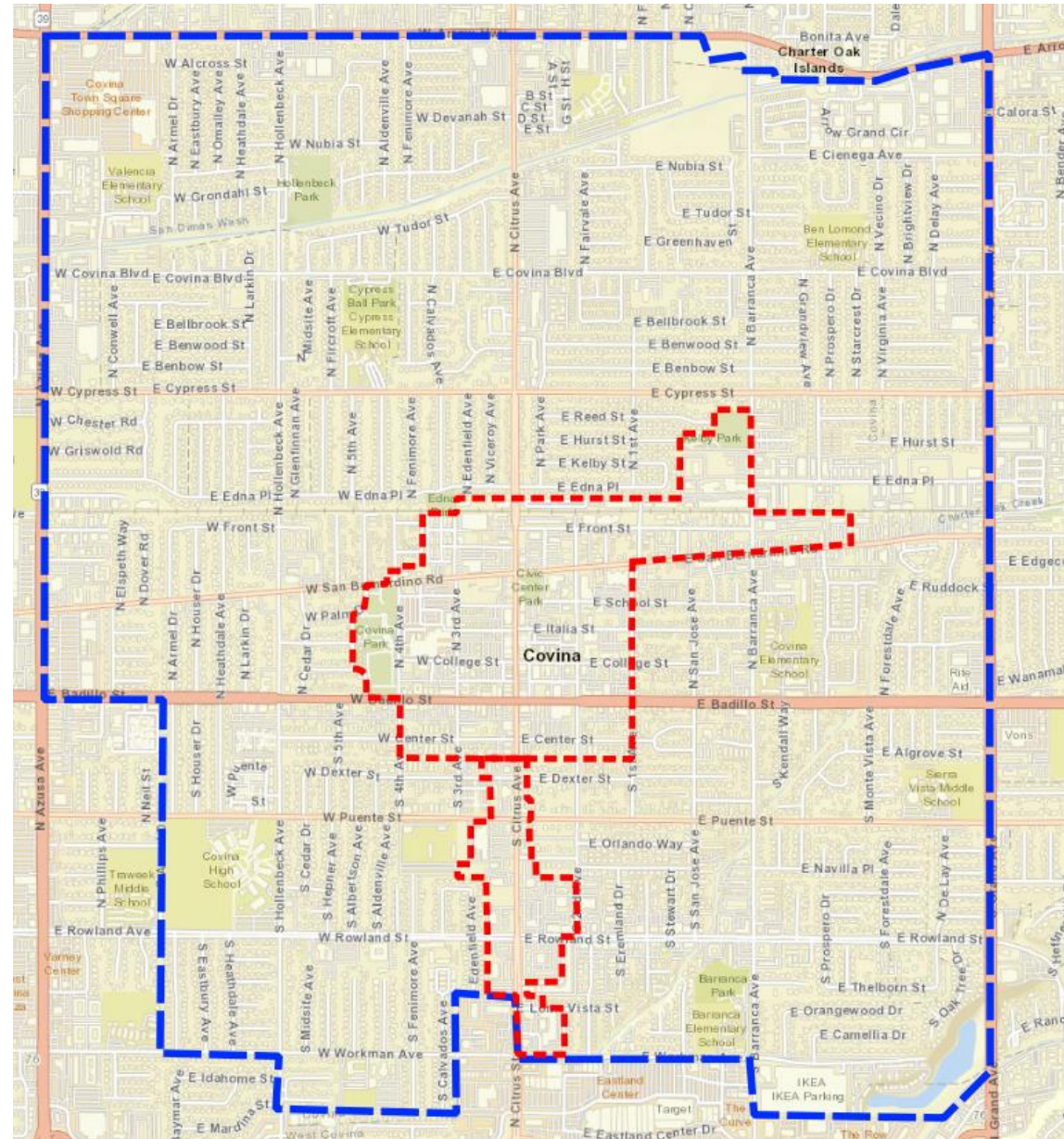
KOSMONT COMPANIES

COVINA CASMCP STUDY AREA

ENHANCED INFRASTRUCTURE FINANCING DISTRICT

The City is currently evaluating the potential use of an Enhanced Infrastructure Financing District, a tax increment financing tool to fund public infrastructure that can help catalyze private investment. (Bus service would not typically fall into that category)

The EIFD focus area is centered around the Town Center Specific Plan area and southerly along the Citrus Avenue mixed-use corridor.



CITRUS AVENUE CORRIDOR OVERVIEW

The Citrus Ave Corridor is characterized by 1 million SF of retail buildings / shopping centers, a downtown area with a performing arts center and surrounding restaurants / businesses, and almost 300 residential units.

Recent Market Activity

- 4,400 SF retail building at 1118 N Citrus Ave, built in 2020
- 6,450 SF storefront retail space at 445-495 N Citrus Ave, built in 2020
- 6,367 SF freestanding retail at 435-445 N Citrus Ave, built in 2020
- 10-unit apartment building at 135 E Badillo St, built in 2022, with 3,100 SF of ground floor retail
- 40,000 SF retail / residential building proposed at 137 W San Bernardino
- 12-unit apartment building at 155 E San Bernardino Road, expected to be delivered in August 2023.

There are many potential areas for future development particularly in areas near Covina Station area and areas at the south end of the corridor.

Commercial Real Estate Summary

2022 Q2	Retail	Office	Multifamily
Inventory	1,042,100 SF	286,200 SF	297 Units
Buildings	150	39	6
Inventory Change Since 2017	+ 17,200 SF	-	+ 10 Units
Vacancy	1.4%	3.7%	1.3%
Market Rent*	\$25.79	\$25.74	\$1,175
Upcoming	40,000 SF	-	12 Units

CITRUS AVENUE CORRIDOR MAP



SAN BERNARDINO ROAD CORRIDOR OVERVIEW

The San Bernardino Road Corridor is characterized by significant retail buildings, medical office near the medical center, retail shops / restaurants near the intersection with Citrus Ave, and almost 400 residential units, as well as automotive and light industrial properties.

Recent Market Activity

- 6,450 SF storefront retail space at 445-495 N Citrus Ave, built in 2020
- 6,367 SF freestanding retail at 435-445 N Citrus Ave, built in 2020
- A proposed 40,000 SF storefront retail / residential building at 137 W San Bernardino Road
- A proposed 12-unit apartment building at 155 E San Bernardino Road, expected to be delivered in August 2023.

There are many potential areas for future development particularly in areas near intersections with Citrus Ave and the mixed-industrial area near the Metrolink Station.

Commercial Real Estate Summary

2022 Q2	Retail	Office	MF	Industrial
Inventory	530,900 SF	168,800 SF	384 Units	461,600 SF
Properties	98	34	37	55
Inventory Change Since 2017	-11,200 SF	0	0	0
Vacancy	3.0%	0%	2.0%	2.8%
Market Rent*	\$26.27	\$28.20	\$1,528	\$17.37
Upcoming SF*	40,000	0	12	0

SAN BERNARDINO ROAD CORRIDOR MAP



BADILLO STREET CORRIDOR OVERVIEW

The Badillo Street Corridor is characterized by small retail buildings, small medical office buildings (particularly around the medical center area), and single-family neighborhoods, and low-rise / garden style apartment buildings.

Recent Market Activity

- 10-unit apartment building at 135 E Badillo St, built in 2022, with 3,100 SF of ground floor retail
- 10,100 SF+ office building is under construction at 304 W Badillo St

There are many potential areas for future development particularly in areas near intersections with Citrus Ave and Azusa Ave.

Commercial Real Estate Summary

2022 Q2	Retail	Office	Multifamily
Inventory	327,800 SF	400,000 SF	518 Units
Properties	51	63	70
Inventory Change Since 2017	-	-4,500 SF	+10 Units
Vacancy	0.8%	2.1%	3.6%
Market Rent*	\$24.77	\$27.59	\$1,595
Upcoming SF*		10,100 SF	

BADILLO STREET CORRIDOR MAP



CASE STUDY REVIEW

TRANSIT / ACTIVE TRANSPORTATION & ECONOMIC DEVELOPMENT

The addition of bike lanes / pedestrian areas in commercial corridors is sometimes met with apprehension from local businesses, who are concerned about negative economic impacts due to the loss of parking in front of their businesses.

However, in a variety of case studies from other cities, pedestrian and bike improvements have been analyzed to understand their economic impact – in most cases, these studies tend to show either a neutral or positive impact on the vitality of retail businesses on streets impacted by road diets.

Key findings include:

- Bicyclists and pedestrians can be a sizable portion of a businesses' clientele in a downtown area; while their per-trip spending can be lower than that of customers who drive, they tend to make a larger number of trips
- Merchants in downtown areas tend to over-estimate the percentage of their customers who come via car and underestimate the percentage who bike or walk, thus over-estimating the impact of lost parking
- Non-drivers can spend a long amount of time in a downtown area, likely leading to greater spending within the downtown district (and additional spending at locations other than their primary destination)

CASE STUDY REVIEW

Portland State University – Economic and Business Impacts of Mobility Improvements

Researchers used a variety of analytic approaches and data sources to estimate the economic impacts of bicycle and street improvements in seven corridors across four cities – Portland, OR; San Francisco, CA; Minneapolis, MN; and Memphis, TN). The analysis observed some mixed results, but generally found that street improvements have either positive impacts on corridor economic and business performance or nonsignificant impacts.

York Avenue Road Diet – Los Angeles

In 2006, the City of Los Angeles put 1.1 miles of York Boulevard (between Eagle Rock Blvd and Avenue 52) on a road diet – narrowing the street from four mixed-use travel lanes to two mixed-use travel lanes, a turn lane, and bicycle lanes.

According to a study conducted in 2011/2012:

- 85% of merchants felt new bike lanes did not hurt their businesses, while a similarly high percentage of customers felt the bike lanes were important roadway additions
- Businesses and customers alike seem to prefer slower vehicle speeds or feel that speed is unimportant
- Businesses assumed that ~60-70% of their customers arrived by car, only 15-30% customers surveyed arrived by car
- Analysis found that the road diet had little impact on property sales, values sales tax collections, and business formation

CASE STUDY REVIEW

UC Davis – Bicyclists as Consumers

Scholars from UC Davis published a study in 2014 that analyzed the differences in shopping behavior between bicyclists and motorists in downtown Davis. The study found that cyclists made more frequent shopping trips than customers traveling by car, and also found that cyclists spent slightly more on their purchases than motorists. The study also found that people who biked downtown were more loyal customers to the downtown area – they spent a larger share of their total spending downtown than drivers did.

Toronto – Economic Impacts of Removing Parking for Bike Lanes

A series of economic impact studies were conducted by The Centre for Active Transportation on bike lane corridors in Toronto between 2009 and 2017. The studies found that a large majority of visitors to the study areas arrive by active transportation (bicycle or walking), and that merchants tended to overestimate the percentage of their customers who arrived by car. The studies also found that visitors who used active transportation visited more often and spent more money compared to customers who drove to the area, presumably to purchase a specific item.

CASE STUDY REVIEW

Institute for Transportation & Development Policy – Economic Case for Cycling

A 2022 report by researchers at the ITDP notes that more trips by bicycles benefit individuals, businesses and cities, and that more demand for bicycles spurs jobs and economic opportunities. The report notes that

- Bicycles have a much lower cost for purchase / operation / maintenance than private cars
- Reducing vehicle trips minimizes costs to society such as congestion, air pollution / green house gas emissions
- High quality cycling infrastructure can raise property values / municipal revenues
- Improving access by bicycle to commercial areas can result in higher retail sales
- Bicycle infrastructure can facilitate bicycle tourism and recreational opportunities
- Mobility infrastructure can also support private investment in shared micromobility services (such as bikeshare / e-scooter)
- Cycling infrastructure can be used for local goods delivery while reducing pollution / congestion

Smart Growth America – Complete Streets Project Outcomes

A 2015 report from Smart Growth America notes that Complete Streets projects can be a vital part of an economic development strategy, playing a key role in downtown revitalization efforts. The report's economic analysis assessed business impacts on 22 commercial areas. Overall, the Complete Streets projects were found to be supportive of employment, new businesses, and higher property values, and the report notes that some cities observed higher retail sales along the improved corridors.

CASE STUDY REVIEW

Sources and Links

Liu, Jenny H. and Shi, Wei. Understanding Economic and Business Impacts of Street Improvements for Bicycle and Pedestrian Mobility – A Multicity Multiapproach Exploration. NITC-RR-1031/1161. Portland, OR: Transportation Research and Education Center (TREC), 2020.

Link: [https://ppms.trec.pdx.edu/media/project_files/NITC-RR-1031-](https://ppms.trec.pdx.edu/media/project_files/NITC-RR-1031-1161_Understanding_Economic_and_Business_Impacts_of_Street_Improvements_for_Bicycle_and_Pedestrian_Mobility.pdf)

[1161_Understanding_Economic_and_Business_Impacts_of_Street_Improvements_for_Bicycle_and_Pedestrian_Mobility.pdf](https://ppms.trec.pdx.edu/media/project_files/NITC-RR-1031-1161_Understanding_Economic_and_Business_Impacts_of_Street_Improvements_for_Bicycle_and_Pedestrian_Mobility.pdf)

McCormick, Cullen. “York Boulevard: The Economics of a Road Diet.” Luskin School of Public Affairs, University of California, Los Angeles, CA Link:

https://nacto.org/docs/usdg/yorkblvd_mccormick.pdf

Popovich, Natalie, and Susan L. Handy. "Bicyclists as consumers: Mode choice and spending behavior in downtown Davis, California." *Transportation research record* 2468, no. 1 (2014): 47-54. Link: [https://www.researchgate.net/profile/Natalie-](https://www.researchgate.net/profile/Natalie-Popovich/publication/276803953_Bicyclists_as_Consumers/links/5661cee208ae4931cd5bcd20/Bicyclists-as-Consumers.pdf)

[Popovich/publication/276803953_Bicyclists_as_Consumers/links/5661cee208ae4931cd5bcd20/Bicyclists-as-Consumers.pdf](https://www.researchgate.net/profile/Natalie-Popovich/publication/276803953_Bicyclists_as_Consumers/links/5661cee208ae4931cd5bcd20/Bicyclists-as-Consumers.pdf)

Information about the Toronto studies can be found on the Centre for Active Transportation’s website here: <https://www.tcat.ca/resources/bloor-street-economic-impact-studies/>

Making the Economic Case for Cycling, Institute for Transportation and Development Policy. June 2022. Report and other information can be found here:

<https://www.itdp.org/publication/economics-of-cycling/>

Safer Streets, Stronger Economies – Complete Streets Project Outcomes From Across the Country. National Complete Streets Coalition and Smart Growth America, March 2015. Link: <https://smartgrowthamerica.org/wp-content/uploads/2016/08/safer-streets-stronger-economies.pdf>

CASE STUDY – IMPACT OF CLOSING STREETS TO VEHICLES & MULTIMODodal IMPROVEMENTS

VENTURA / SANTA BARBARA / CULVER CITY

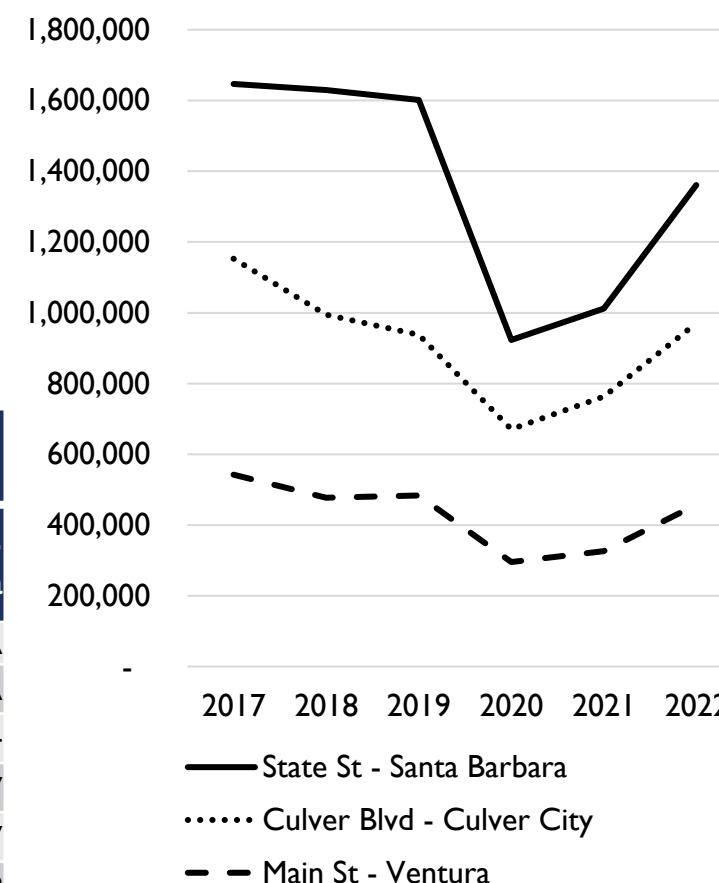
As a response to the COVID-19 pandemic, the cities of Santa Barbara and Ventura have each closed a portion of their downtown districts to vehicular traffic, increasing pedestrian access and outdoor dining spaces. The City of Culver City also made mobility changes during this time period, adding a dedicated bus lane and bike lanes to several downtown corridors.

Using PlacerAI data, Kosmont found that closure of major downtown streets has resulted in visitation levels and length of visits generally in-line with, and in some cases exceeding, pre-COVID patterns.

Jan – June Visits	State St - Santa Barbara	Culver Blvd - Culver City	Main St - Ventura
2017	1,646,775	1,153,117	542,161
2018	1,629,856	995,014	477,641
2019	1,601,678	938,047	483,486
2020	922,756	671,107	295,176
2021	1,011,654	763,463	326,118
2022	1,361,256	970,388	457,067

Avg / Median Dwell Time			
Jan – June Visits	State St - Santa Barbara	Culver Blvd - Culver City	Main St - Ventura
2017	NA	NA	NA
2018	NA	NA	NA
2019	79 / 65	81 / 60	104 / 74
2020	72 / 58	68 / 47	95 / 67
2021	70 / 56	62 / 42	117 / 77
2022	75 / 59	68 / 49	111 / 78

January - June Visits



Appendix D - Infrastructure Study

Covina Active Streets and Multimodal Connectivity Plan (ASCMP) Existing Conditions Infrastructure
(Study Area) Technical Memorandum

Page 1

TECHNICAL MEMORANDUM

To: Mr. Miguel Núñez
Fehr & Peers

From: Narasimha Murthy, PhD, TE

Date: August 18, 2022

Subject: **Covina Active Streets and Multimodal Connectivity Plan (ASCMP)
Existing Conditions Infrastructure (Study Area)
Technical Memorandum**

1. Introduction

The major project objective is to investigate the study area, and the feasibility for developing Active Streets and Multimodal Connectivity Plans (ASMCP) in the City of Covina (City). The city is in Los Angeles County, California; estimated at 22 miles (35 km) east of downtown Los Angeles, in the San Gabriel Valley. The current population is 51,268 according to the 2020 census.

A small stretch of the Interstate 10 freeway is to the south of the city. The city is served by Interstate 210 (Foothill Freeway) to the north, Interstate 605 (San Gabriel River Freeway) to the west, State Route 57 (Orange Freeway) to the east, and Interstate 10 to the south. The Metrolink San Bernardino Line passes through the city just north of the downtown area and Foothill Transit Center (Transit Center) is north of San Bernardino Avenue.

The City has a total area of seven (7) square miles (18 sq km); City of West Covina borders the City on both the south and west side. City of Irwindale is to the west, as well as the unincorporated County area of Vincent, and the City of Baldwin Park. Cities of Azusa and Glendora are to the north, the unincorporated County area of Charter Oak to the northeast, City of San Dimas to the east, the unincorporated County area of Ramona, and the City of Pomona to the southeast.

The city has grown in the past 50 years and has basic infrastructure built across the city, including roads, transportation, water, and electricity (energy). The city has public buildings, private offices, schools ranging from elementary to college, medical centers, and big box commercial stores such as Home Depot, Costco, Walmart, and IKEA. In addition, it has the Covina Metrolink station and Covina Transit Center.

1.1 Project Study Area

The study area for this project is shown in **Figure 1** (bordered in black), Arrow Highway to the north, Grand Avenue to the east, Azusa Avenue to the west, and the I-10 freeway to the south (close to Workman Avenue). The estimated total study area is three (3) square miles (approximately 1.5 miles east-west and 2.0 miles north-south). **Figure 1** shows the Covina Metrolink Station and the Covina Transit Center along Citrus Avenue to the north of San Bernardino Road. Citrus Avenue passes through the middle of the study area. **Figure 2** shows the north-south and east-west oriented street network in the study area with the existing right-of-way (R/W).

The major north-south oriented arterials are Azusa Avenue, Hollenbeck Avenue, Citrus Avenue, Barranca Avenue, 1st Avenue, 2nd Avenue, and Grand Avenue. The major east-west oriented arterials are Arrow Highway, Covina Boulevard, Cypress Street, San Bernardino Road, Badillo Street, Rowland Avenue, College Street, Cienega Avenue, and Workman Street.

There are local minor north-south and east-west streets that form the entire roadway network in the study area connecting businesses, schools, and residential areas within the city.

The City's downtown area in **Figure 1** (smaller circle area) is between Badillo Street to the south, College Street to the north, 2nd Avenue to the east, and 3rd Street to the west. The downtown area has restaurants, shops, cinemas, and attractions within the small area. In the downtown area the travel lanes are reduced from two (2) to one (1), parking restrictions with additional pedestrian safety signs are provided.

The downtown area remains busy during both weekdays and weekends. **Figures 3 and 4** shows the typical Covina downtown area with parking on both sides of the road with one (1) through lane. Citrus Avenue from north to south has varying posted speeds of 40, 35, and 25 miles per hour (mph) from south to north in different sections of the road. The speed limit in the downtown area is 25 mph.

*The existing right-of-way (R/W) for the major north-south and east-west streets are provided in **Figure 2**. The R/W for the major arterials ranges between 80 and 50 feet. Most of the roads are on level terrain and the grades are not greater than 5 percent. The major roads have a posted speed of 40 miles per hour (MPH), except in the downtown area. The intersection of major north-south and east-west streets have been signalized (most have protected left turns and yield phase depending on the volume of traffic at the intersection). The following section provides the brief roadway characteristics of the major roads.*

North-South Major Streets

Azusa Avenue (Highway 39) is a major road with 80 feet R/W and forms the western limit of the study area. This major north-south street has two-way turning lanes (TWTL), left turn pockets (LTP), medians, right turn pocket (RTP0) and it has 2 lanes in each direction. It connects the I-10 to the south and SR 210 freeway to the north. The street has commercial establishments and less residential units. There two (2) High Schools to the north of San Bernardino Road

Hollenbeck Avenue has 60 feet R/W. It has bike lane with two (2) lanes in each direction between AR/W Highway and Covina Blvd. To the north of Cypress Street, it is mostly commercial, whereas to the south of Cypress it is residential. There is a school in the corner of Rowland Street and Hollenbeck Avenue and a Baseball Park to the north of Covina Blvd.

Citrus Avenue has 80 feet R/W, and it is in the center of the study area. The downtown area is located to the north of Badillo Street to San Bernardino Road along Citrus Avenue. The downtown area posted speed is 25 MPH. The two (2) travel lanes are reduced to one (1) travel lane, the intersections in this section are clearly marked with different tiles, including mid-block pedestrian crossings. Additional roadside parking is provided by removing a through lane for travel, which assists in reducing auto speed. To the north of E Front Street there are single family residential units up to Cypress Street on both sides. But Citrus Avenue is mostly commercial with limited bike lane to the south between Covina Blvd and E Front Street.

2nd Avenue starts at E Front Street and ends at E Rowland Street. An important north-south street with 80 feet R/W. Majority of the roadway is residential, except between Navilla Place to Rowland Street it is commercial.

Barranca Avenue has 60 feet R/W and to the north of Covina Blvd mixed commercial use. To the south up to Rowland Avenue mostly residential.

Grand Avenue forms the eastern limit of the study area. Like Azusa Avenue it provides access to both I-10 and SR 210 freeways. From Rowland Avenue to San Bernardino Road, it is mostly residential with 2 lanes in each direction. To the north of San Bernardino Road, it is mixed commercial and residential.

East-West Streets

Arrow Highway is a major arterial with 2 lanes in each direction with 80 feet R/W. The arterial mixed use of commercial and residential units between Azusa Avenue and Grand Avenue. Arrow Highway is the northern limit of the study area. Like Azusa Avenue and Grand Avenue, it has left and right turn pockets at major intersections and acts as a major thoroughfare for the region.

Covina Blvd has 60 feet R/W, and it has bike lanes between Hollenbeck Avenue and Citrus Avenue with mostly residential units. At the intersection of Covina Blvd and Citrus Avenue is the Covina Transit Center. It has two lanes in each direction with left turn pockets at major intersections with median.

Cypress Avenue has 60 feet R/W with two lanes in each direction with left turn pockets and median. Mostly residential units along Cypress Avenue between N Cornwell Avenue to Grand Avenue.

San Bernardino Street has 60 feet R/W with 2 lanes in each direction with mixed residential units and commercial use. Between Azusa Avenue and 3rd Street majority land use is residential. From 3rd Street to Grand Avenue, it is commercial plus light industrial areas.

Badillo Street has 80 feet R/W with two lanes in each direction. It is a major arterial with left and right turn pockets and medians. It has bike lane throughout between Azusa Avenue and Grand Avenue, except between 2nd and 4th streets. Badillo Street is mostly mixed residential and commercial use.

Puente Street has 50 feet R/W with two lanes in each direction with single family residential units with schools and park, limited commercial use along the arterial.

Rowland Avenue forms the southern limit of the study area, and it has 70 feet R/W with two lanes in each direction with mixed residential and commercial use.

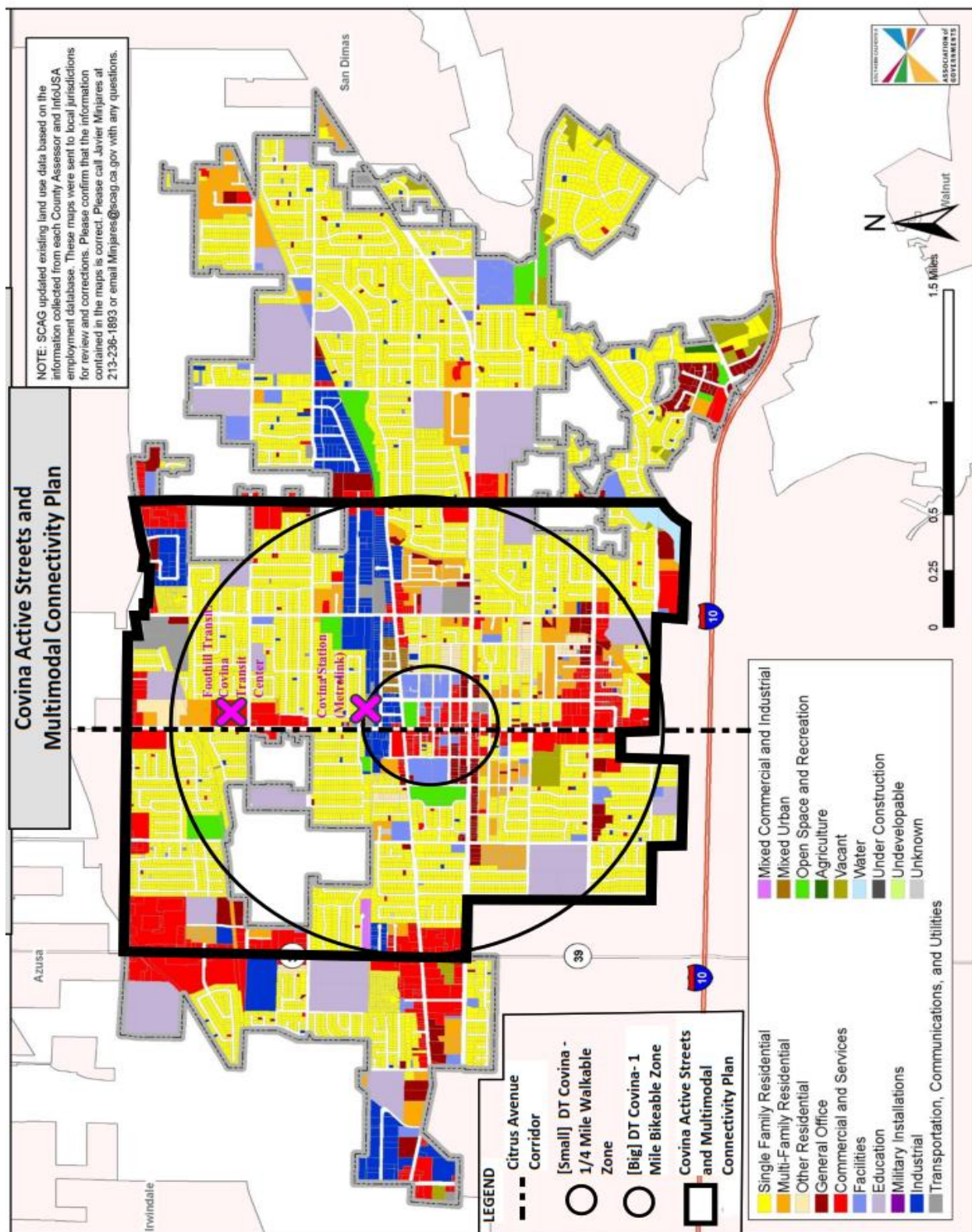


Figure 1 Existing Land Use and Project Study Area

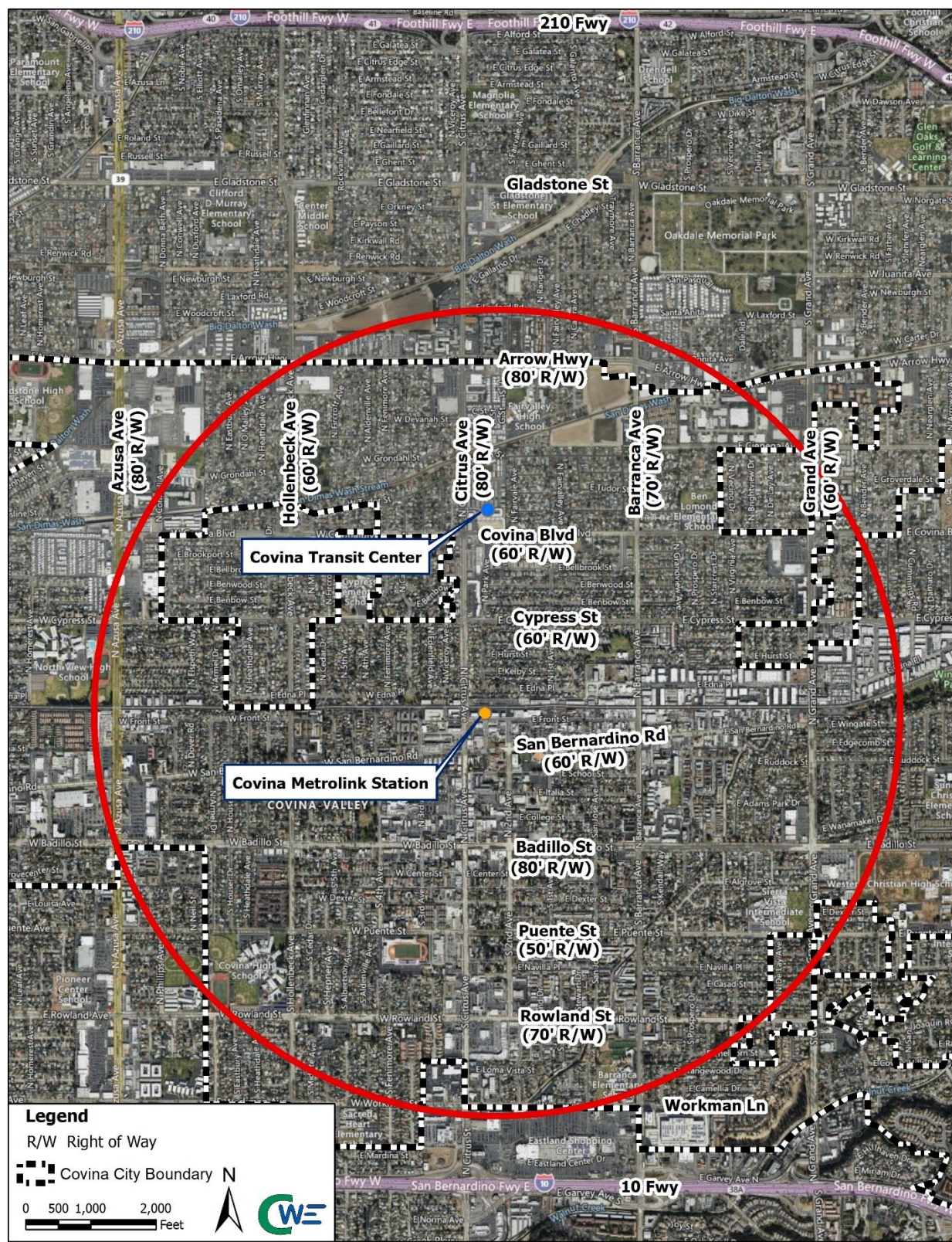


Figure 2 Project Study Area – Major Roadway Network



Figure 3 Downtown Covina - North of Badillo Street



Figure 4 Downtown Covina – Intersections & Pedestrian Crosswalk

2. Infrastructure and Transportation System

Currently, cities are fraught with infrastructure challenges, whether it is short- or long-term, building new infrastructure, or maintaining it. The recent trend of declining tax revenues and transportation funds makes it difficult for local governments to maintain basic services, let alone plan for future infrastructure needs. This study is targeted towards providing active transportation options and establishing a multimodal connectivity plan for the City by using the existing infrastructure and adding the necessary elements for travel and safety.

2.1 Study Area – Existing Infrastructure Status

The entire study area was surveyed by driving through the roadway network both north-south and east-west streets. During the field survey, notes were made on important road elements such as signalization, bikeways, left turn pockets, school zones, pedestrian signs, major and minor shopping centers and strips, cinemas, downtown area, and any other road elements of importance. Also, photos were taken at important roadways and intersections for further analysis as needed for the study.

2.1.1 Existing Conditions

Majority of the streets in the study area have mixed commercial and residential (single family homes to apartments) activities and there are streets exclusively with single and multi-family housing. There are residential units near educational institutions, such as elementary and high schools, located close to these residential areas. This provides the students to travel (walk/bike) to the schools from the nearby residences.

In the study area, there are major north-south and east-west streets that serve the traffic needs as shown in **Figure 2**. The major north-south oriented arterials are Azusa Avenue, Hollenbeck Avenue, Citrus Avenue, Barranca Avenue, 1st Avenue, 2nd Avenue, and Grand Avenue. The major east-west oriented arterials are Arrow Highway, Covina Boulevard, Cypress Street, San Bernardino Road, Badillo Street, Rowland Avenue, College Street, Cienega Avenue, and Workman Street.

The majority of the major intersections in the study area have adequate left turn pockets and the major intersections are signalized depending on the volume of traffic at the intersections. All the major roads have 40 mph as posted speed, with exceptions along Citrus Avenue near the downtown area and near school zones having reduced speeds (25 mph). The minor intersections intersecting the major roads have stop sign control. In addition, near school zones, proper signage indicating pedestrian crossing, and bikeway lanes are marked for the safety of road users.

The right-of-way (R/W) ranges between 80 feet and 50 feet for all the major north-south and east-west roads as shown in **Figure 2**. At major intersections with high volumes the right turn pockets are provided.

Grand Avenue, Citrus Avenue, and Azusa Avenue have direct access to freeways (I-10 to the south and SR-210 to the north). The remaining north-south and east-west roads have indirect access to freeways using the major connectors. The downtown area described in Section 1 and shown in Figures 1, 3 and 4 has reduced speed of 25 mph for a limited distance north of Badillo Street and reduced number of through lanes from two lanes (2) to one (1), which provide more parking in the downtown area and also assists to reduce auto speeds.

In the downtown area, well-marked pedestrian crossings with different road surface color (tiles are used) for visibility and pedestrian signs as shown in Figure 4. This arrangement also provides advanced notice to drivers entering the downtown area and clearly differentiates other areas within the study area, such as school zones. Most of the intersections in the study area meet the required 4' or wider and most observed intersections have curb ramps and truncated domes at all corners. Some of the major arterials allow curbside parking as shown in **Figure 5**.



Figure 5 Roadside Parking – San Bernardino Road

3. Major Transportation Centers

The Southern Pacific Railroad and the Metrolink San Bernardino Line pass through the city just north of the downtown area. The Covina Transit Center is served by both local and express bus lines and is located at the Citrus Avenue and Covina Boulevard intersection, as shown in **Figure 6**. The Transit Center in Covina has 360 estimated parking spaces. From the Covina Transit Center, bus connections are available to the Cities of Azusa, Glendora, and Walnut.

Covina Transit Center

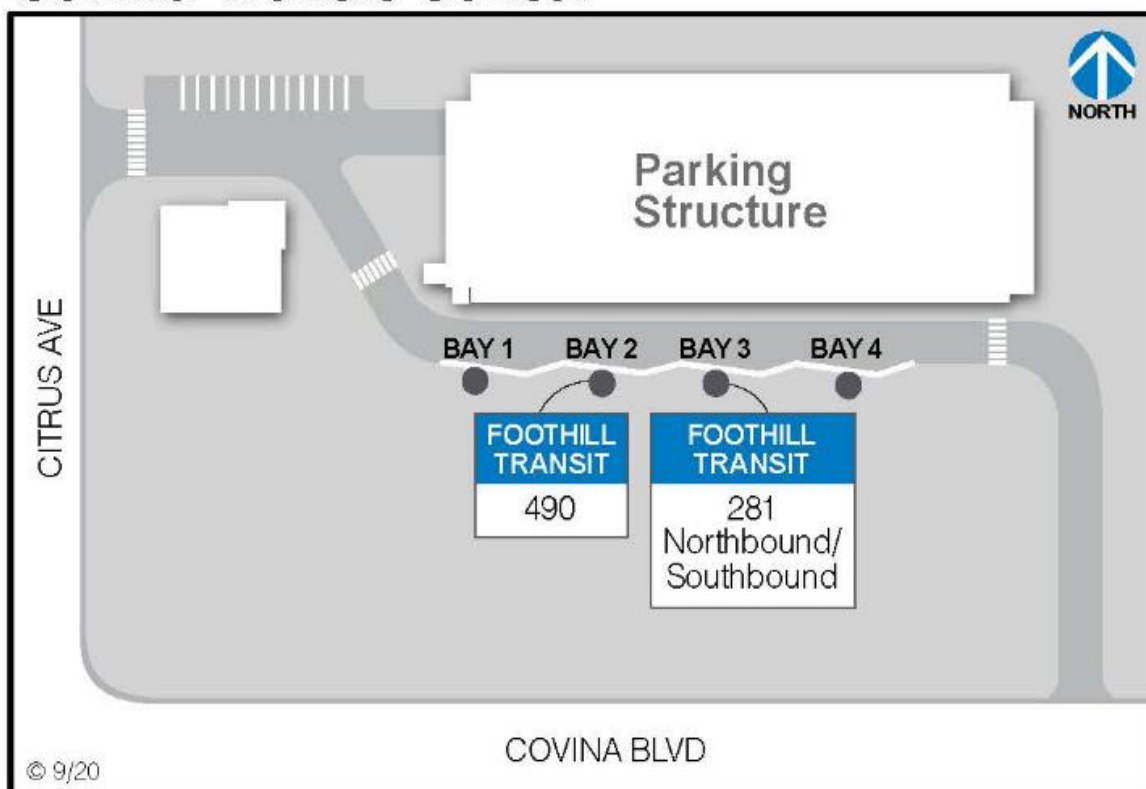


Figure 6 Covina Transit Center

The Covina Metrolink station is located three-quarter of a mile to the south of the Covina Transit Center. It is located at 600 N Citrus Avenue to the east between Front Street and Edna Place as shown in **Figure 7**. The station serves the San Bernardino line of Metrolink connecting Downtown Los Angeles (west) and Downtown San Bernardino (east), passing through Downtown Pomona. There are an estimated 1000 parking spaces in a parking lot and parking structure located close to the station with a daily fee.

3.1.1 Transit Oriented Development (TOD)

One of the project tasks is to identify a suitable location for the development of a Transit Oriented Development (TOD) site. The City has provided twelve (12) suitable TOD sites, one must be identified as the most suitable site as shown in **Figure 8**.



Figure 7 Access to Metrolink Station, Covina

SB 743 (Steinberg, 2013) updates the way transportation impacts are measured in California for new development projects, making sure facilities are built to allow Californians more options to drive less. TOD integrates the building of housing, retail, office, and public space together focused on transit stations (both bus and rail). This infill of development allows people within comfortable walking distance, usually within a quarter mile, of a public rail transit station to reduce automobile dependence for local and work trips.

In addition, the attraction of an accessible transit system increases the land use value in the area, commuter's health risks are reduced, and provides additional active transportation activities to the community [1,2]. The selection of suitable site factors needs to be considered and evaluated such as the location, proximity to transit centers, economic feasibility (land value and taxes), size, share of commercial and residential (usually apartments), and availability of land.

The significant benefits of building adjacent to rail transit stations through TODs has been proven worldwide with regards of strengthening local economic conditions, increase of transit ridership, improved social and health benefits, increase of land-values and real estate, while creating a more sustainable community [3].

1. Potential Health Implications and Health Cost Reductions of Transit-Induced Physical Activity
I.N. Sener, Richard J. Lee and Zachary Elgart. Journal of Transportation Health, June 2016 pp133-140.
2. <https://doi.org/10.46830/wriprn.20.00082>; Synergizing Land Value Capture and Transit-Oriented Development: A Study of Bengaluru Metro.
3. Measuring the success of transit-oriented development; JL Renne, C Curtis, and Luca Bartolini - Transit Oriented Development, 2016 - taylorfrancis.com

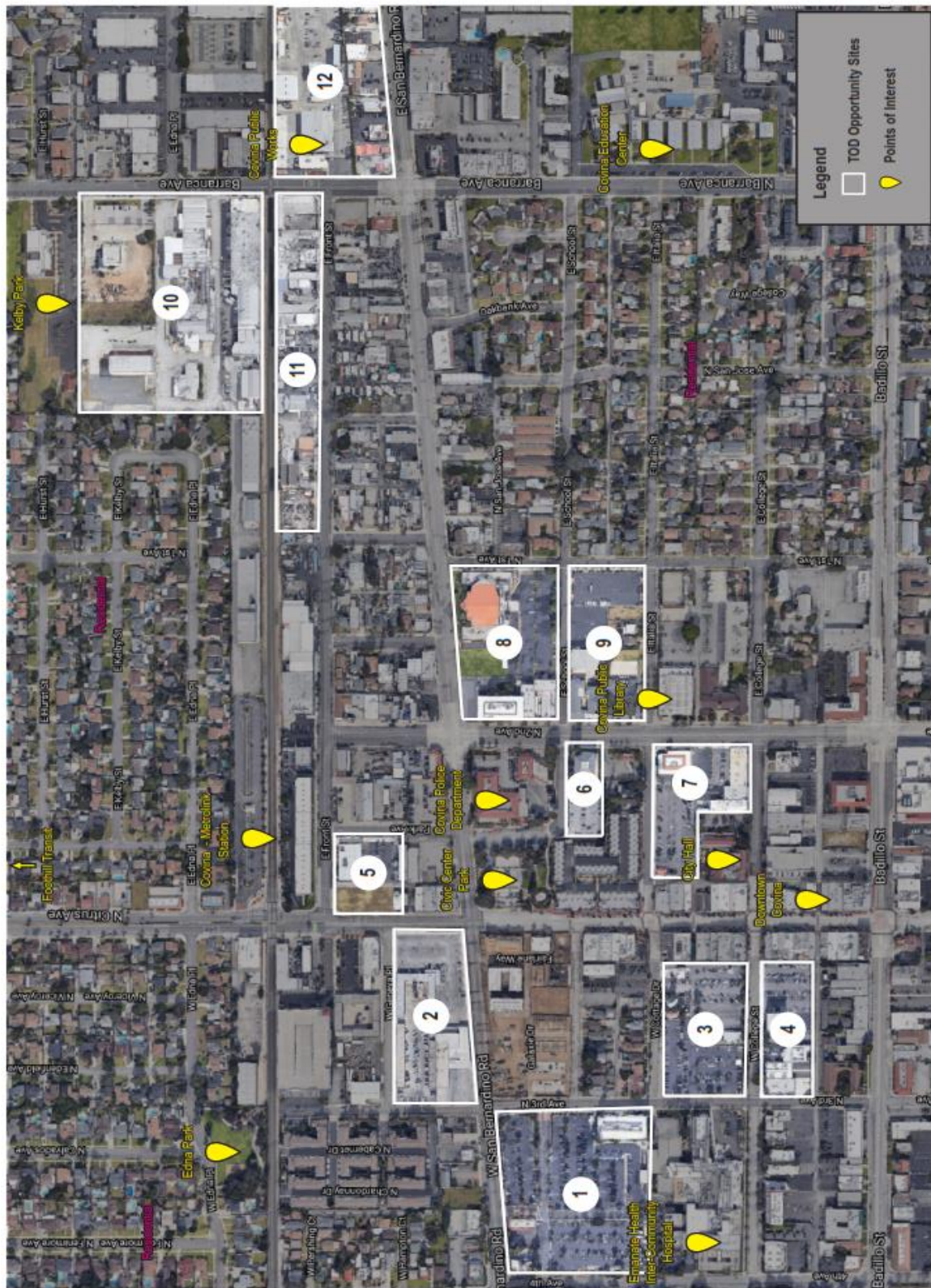


Figure 8 Transit Oriented Development Sites Identified

4. Existing Active Transportation

Active transportation is described modes of travel such as walking, cycling, in-line skating, and skateboarding using roadway and sidewalk surfaces. It is also combined with other modes of travel such as buses and trains. Currently, there are bike lanes marked on City streets.

The identified streets with bike lanes are Citrus Avenue, Badillo Street, 2nd Street, Hollenbeck Avenue, and Covina Boulevard. Only Badillo Street has bike lane from Azusa Avenue to Grand Avenue (with a gap between 2nd and 4th Avenue), while the remaining streets are only partially marked for a bike lane. **Figures 9,10 11 and 12** shows typical bike lanes, road markings, and signs in the study area.

Adding more bike lanes to selected road networks helps to encourage bike riding and increases access to destinations by bike. In addition, health risks are reduced [1]. The selection of additional active transportation facilities such as bike lanes will require evaluation of the streets, safety, and accessibility to attractions such as schools and commercial places

4.1.1 Selection of Bike Lane Route

The safety of both pedestrians and bike riders needs to be considered in designing the Active transportation within the focused study streets in **Figure 13**. The development of Bike Lane Type (I, II, III, and IV) selection primarily depends on the traffic volume and operating speed characteristics of the roadway, which are often implied by their functional classification (arterial, collector, local) within various land use contexts of the city. The minimal allowable width of a bike lane is 5 feet from the face of a curb or guardrail to the bike lane stripe. The overall safety of all road users should be paramount in selecting and designing the bike facilities.



Figure 9 Bike Lane on Citrus Avenue North of Cypress Street



Figure 10 Advance Bike Lane Sign (for Badillo Street)



Figure 11 Bike Lane on Badillo Street (East of Hollenbeck) with Parking



Figure 12 Bike Lane, Parking and Pedestrian Crossing – 2nd Avenue



Figure 13 Active Streets Focused Area

5. Summary

A site visit was conducted to evaluate the existing infrastructure in the study area for the purpose of developing potential active transportation improvements and identifying a potential TOD site. The entire study area road network was traveled to understand the existing transportation infrastructure such as major and minor arterials, freeway access, major and minor land use developments (schools, commercial, and public buildings), transit centers (rail and bus), and safety aspects of roadway design and development. Existing maps, City-provided data, and aerial imagery were also evaluated.

The existing bike lanes are well-marked. By increasing access to use bikes on appropriately selected road networks in the study area, the city will help encourage commuters to use multimodal transportation. Overall safety of all road users should be paramount in selecting and designing bike lane routes.